



April 30, 2011

Environmental Restoration
16660 South Canal Street
South Holland, IL 60437-

Work Order No.: 11D0874

Re: Markham, IL

Dear Toby Viehweg:

Microbac Laboratories, Inc. - Chicagoland Division received 34 sample(s) on 4/21/2011 2:45:00PM for the analyses presented in the following report as Work Order 11D0874.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Jeff Loewe, Division Manager at jeff.loewe@microbac.com. You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President at james.nokes@microbac.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Falvey", is written over a light blue horizontal line.

Kevin Falvey
Account Manager

**WORK ORDER SAMPLE SUMMARY****Date:** Saturday, April 30, 2011

Client: Environmental Restoration
Project: Markham, IL
Lab Order: 11D0874

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
11D0874-01	MDC-YD		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-02	MDC-YD		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-03	MDC FF2 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-04	MDC-FF2 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-05	MDC FF2 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-06	MDC-FF2 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-07	MDC FF2 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-08	MDC-FF2 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-09	MDC FF2 20		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-10	MDC-FF2 20		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-11	MDC FF1 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-12	MDC-FF1 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-13	MDC FF1 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-14	MDC-FF1 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-15	MDC FF1 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-16	MDC-FF1 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-17	MDC FF1 20		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-18	MDC-FF1 20		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-19	MDC EMC 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-20	MDC-EMC 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-21	MDC EMC 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-22	MDC-EMC 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-23	MDC EMC 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-24	MDC-EMC 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-25	MDC-EMC 20		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-26	MDC-EMC 20		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-27	MDC-901 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-28	MDC-901 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-29	MDC-901 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-30	MDC-901 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-31	MDC-901 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-32	MDC-901 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-33	MDC-901 20		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-34	MDC-901 20		04/20/2011 11:00	4/21/2011 2:45:00PM



CASE NARRATIVE

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Project: Markham, IL

Lab Order: 11D0874

B - the Method Blank associated with the samples contained Chromium and Lead at a level above the reporting limit. This is considered insignificant, as the concentration in the samples was more than ten-times that measured in the blank.

The Matrix Spike and Matrix Spike Duplicate performed on the MDC-YD sample failed the accuracy criteria for, both, soluble and insoluble forms of Hexavalent Chromium. This bias is due to the high indigenous analyte concentration (relative to the spike amount).



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-YD

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-01

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	9000	1.4	B	mg/Kg	10	04/27/2011 21:36
Lead	A	34000	3.5	B	mg/Kg	10	04/27/2011 21:36
		Method: SW-846 7196A				Analyst: GOEHL	
Hexavalent Chromium		Prep Method: SW846 3060A				Prep Date/Time: 04/28/2011 15:39	
Chromium, Hexavalent	A	2800	80	B	mg/Kg	200	04/29/2011 15:07



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-YD

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-02

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 09:07				
TCLP Metals by ICP							
Chromium	A	1.19	0.00300			1	04/25/2011 14:15
Lead	A	7.00	0.00750			1	04/25/2011 14:15



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF2 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-03

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	8600	1.5	B	mg/Kg	10	04/27/2011 21:52
Lead	A	35000	3.8	B	mg/Kg	10	04/27/2011 21:52



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF2 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-04

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	5.28	0.00300			1	04/27/2011 18:59
Lead	A	24.8	0.00750			1	04/27/2011 18:59



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF2 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-05

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	8400	1.5	B	mg/Kg	10	04/27/2011 21:57
Lead	A	34000	3.7	B	mg/Kg	10	04/27/2011 21:57



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF2 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-06

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	2.90	0.00300			1	04/27/2011 19:15
Lead	A	16.5	0.00750			1	04/27/2011 19:15



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF2 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-07

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	7300	1.5	B	mg/Kg	10	04/27/2011 22:03
Lead	A	30000	3.6	B	mg/Kg	10	04/27/2011 22:03



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF2 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-08

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	2.42	0.00300			1	04/27/2011 19:21
Lead	A	0.0813	0.00750			1	04/27/2011 19:21



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF2 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-09

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6300	1.4	B	mg/Kg	10	04/27/2011 22:08
Lead	A	25000	3.6	B	mg/Kg	10	04/27/2011 22:08



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF2 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-10

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	36.3	0.00300			1	04/27/2011 19:26
Lead	A	ND	0.00750			1	04/27/2011 19:26



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF1 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-11

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6100	1.4	B	mg/Kg	10	04/27/2011 22:14
Lead	A	24000	3.6	B	mg/Kg	10	04/27/2011 22:14



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF1 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-12

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	6.50	0.00300			1	04/27/2011 19:32
Lead	A	4.34	0.00750			1	04/27/2011 19:32



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF1 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-13

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6800	1.5	B	mg/Kg	10	04/27/2011 22:19
Lead	A	28000	3.7	B	mg/Kg	10	04/27/2011 22:19



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF1 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-14

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	6.34	0.00300			1	04/27/2011 19:37
Lead	A	2.33	0.00750			1	04/27/2011 19:37



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF1 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-15

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	8000	1.5	B	mg/Kg	10	04/27/2011 22:46
Lead	A	33000	3.8	B	mg/Kg	10	04/27/2011 22:46



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF1 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-16

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	9.20	0.00300			1	04/27/2011 19:43
Lead	A	0.130	0.00750			1	04/27/2011 19:43



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF1 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-17

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6400	1.5	B	mg/Kg	10	04/27/2011 22:52
Lead	A	26000	3.7	B	mg/Kg	10	04/27/2011 22:52



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF1 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-18

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	9.68	0.00300			1	04/27/2011 20:10
Lead	A	0.0419	0.00750			1	04/27/2011 20:10



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC EMC 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-19

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	7100	1.3	B	mg/Kg	10	04/27/2011 22:57
Lead	A	28000	3.3	B	mg/Kg	10	04/27/2011 22:57



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-EMC 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-20

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	1.66	0.00300			1	04/27/2011 20:15
Lead	A	1.04	0.00750			1	04/27/2011 20:15



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC EMC 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-21

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	9100	1.5	B	mg/Kg	10	04/27/2011 23:02
Lead	A	37000	3.8	B	mg/Kg	10	04/27/2011 23:02



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-EMC 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-22

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	7.30	0.00300			1	04/27/2011 20:20
Lead	A	0.0200	0.00750			1	04/27/2011 20:20



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC EMC 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-23

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6700	1.5	B	mg/Kg	10	04/27/2011 23:08
Lead	A	27000	3.8	B	mg/Kg	10	04/27/2011 23:08



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-EMC 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-24

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/25/2011 10:11	
Chromium	A	14.5	0.00300			1	04/27/2011 20:26
Lead	A	0.00900	0.00750			1	04/27/2011 20:26



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-EMC 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-25

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6400	1.5	B	mg/Kg	10	04/27/2011 23:13
Lead	A	26000	3.7	B	mg/Kg	10	04/27/2011 23:13



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-EMC 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-26

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	17.5	0.00300			1	04/27/2011 20:31
Lead	A	0.00500	0.00750			1	04/27/2011 20:31



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-27

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	7600	1.3	B	mg/Kg	10	04/27/2011 23:18
Lead	A	31000	3.3	B	mg/Kg	10	04/27/2011 23:18



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-28

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	4.35	0.00300			1	04/27/2011 20:36
Lead	A	1.72	0.00750			1	04/27/2011 20:36



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-29

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	7500	1.4	B	mg/Kg	10	04/27/2011 23:24
Lead	A	30000	3.5	B	mg/Kg	10	04/27/2011 23:24



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-30

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	3.14	0.00300			1	04/27/2011 20:42
Lead	A	0.0624	0.00750			1	04/27/2011 20:42



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-31

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6700	1.4	B	mg/Kg	10	04/27/2011 23:29
Lead	A	28000	3.6	B	mg/Kg	10	04/27/2011 23:29



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-32

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	2.58	0.00300			1	04/27/2011 20:47
Lead	A	0.00280	0.00750			1	04/27/2011 20:47



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-33

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6500	1.5	B	mg/Kg	10	04/27/2011 23:35
Lead	A	26000	3.7	B	mg/Kg	10	04/27/2011 23:35



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-34

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	2.16	0.00300			1	04/27/2011 20:52
Lead	A	0.00970	0.00750			1	04/27/2011 20:52

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed
mg/L	=	Milligrams per Liter (ppm)
mg/Kg	=	Milligrams per Kilogram (ppm)
U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
B	=	Detected in the associated method Blank at a concentration above the routine PQL/RL
D	=	Dilution performed on sample
ND	=	Not Detected at the Reporting Limit (or the Method Detection Limit, if used)
E	=	Value above quantitation range
H	=	Analyte was prepared and/or analyzed outside of the analytical method holding time
I	=	Matrix Interference
R	=	RPD outside accepted recovery limits
S	=	Spike recovery outside recovery limits
Surr	=	Surrogate
DF	=	Dilution Factor
RL	=	Reporting Limit
MDL	=	Method Detection Limit
NR	=	Not Recovered

ANALYTE TYPES: (AT)

A,B	=	Target Analyte
I	=	Internal Standard
M	=	Summation Analyte
S	=	Surrogate
T	=	Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

MBLK	=	Method Blank	ICSA	=	Interference Check Standard "A"
DUP	=	Method Duplicate	ICSAB	=	Interference Check Standard "AB"
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate
BS	=	Method Blank Spike	BSD	=	Method Blank Spike Duplicate
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank
ICV	=	Initial Calibration Verification	CCV	=	Continuing Calibration Verification
PDS	=	Post Digestion Spike	SD	=	Serial Dilution
OPR	=	Ongoing Precision and Recovery Standard			

CERTIFICATIONS

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

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The American Association for Laboratory Accreditation [A2LA] for Environmental Department of Defense Testing, ISO/IEC 17025 (Certificate# 3045.02)

Illinois EPA for the analysis wastewater and solid waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (accreditation #200064)

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Kentucky EPPC for the analysis of samples applicable to the Underground Storage Tank program (lab #75)

North Carolina DENR for the environmental analysis for NPDES effluent, surface water, groundwater, and pretreatment regulations(certificate #597)

Wisconsin DNR for the chemical analysis of wastewater and solid waste (lab #998036710)

COOLER INSPECTION

Client Name: Environmental Restoration

Date: Saturday, April 30, 2011
Date/Time Received: 04/21/2011 14:45

Work Order Number: 11D0874

Received by: Ken Smith

Checklist completed by: 4/22/2011 9:14:00AM Ken Smith

Reviewed by: 4/22/2011 KGF

Carrier Name: Microbac

Cooler ID: Default Cooler

Container/Temp Blank Temperature: 5.00°C

After-Hour Arrival?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Shipping container/cooler in good condition?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample containers?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
COC present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient client identification?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient sample collector information?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included a sample description?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC agrees with sample labels?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate matrix?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included date of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included time of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate number of containers?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples in proper container/bottle?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sample containers intact?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
All samples received within holding time?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
If the samples are preserved, are the preservatives identified?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	

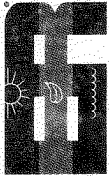
If No, adjusted by? _____

COC included the requested analyses?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC signed when relinquished and received?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples received on ice?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples properly preserved?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Voa vials for aqueous samples have zero headspace?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>

Cooler Comments: _____

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.

Sample ID	Client Sample ID	Comments
11D0874-01	MDC-YD	
11D0874-02	MDC-YD	
11D0874-03	MDC FF2 5	
11D0874-04	MDC-FF2 5	
11D0874-05	MDC FF2 10	
11D0874-06	MDC-FF2 10	
11D0874-07	MDC FF2 15	
11D0874-08	MDC-FF2 15	
11D0874-09	MDC FF2 20	
11D0874-10	MDC-FF2 20	
11D0874-11	MDC FF1 5	
11D0874-12	MDC-FF1 5	
11D0874-13	MDC FF1 10	
11D0874-14	MDC-FF1 10	
11D0874-15	MDC FF1 15	
11D0874-16	MDC-FF1 15	
11D0874-17	MDC FF1 20	
11D0874-18	MDC-FF1 20	
11D0874-19	MDC EMC 5	
11D0874-20	MDC-EMC 5	
11D0874-21	MDC EMC 10	
11D0874-22	MDC-EMC 10	
11D0874-23	MDC EMC 15	
11D0874-24	MDC-EMC 15	
11D0874-25	MDC-EMC 20	
11D0874-26	MDC-EMC 20	
11D0874-27	MDC-901 5	
11D0874-28	MDC-901 5	
11D0874-29	MDC-901 10	
11D0874-30	MDC-901 10	
11D0874-31	MDC-901 15	
11D0874-32	MDC-901 15	
11D0874-33	MDC-901 20	
11D0874-34	MDC-901 20	



ENVIRONMENTAL RESTORATION LLC

1666 Fabick Drive
Fenton, MO 63026
(636) 227-7477
Fax (636) 227-6447

Alternate billing information:

Report to: Toby Vitzthum

Email to: t.vitzthum@erllc.com

Project Description:

Phone: 312 446 6325

Fax: 636 680 2476

Client: USEPA

Site/Facility ID #: _____

Collected by: T. Vitzthum

Rush

(Lab MUST Be Notified)

Same Day

Next Day

Two Day

Date Results Needed:

Email? ☒ Yes

No ☐

Fax? ☐ No

Yes ☐

Packed on Ice

N ☒ Y ☐

Sample ID

Comp/Grab

Depth

Time

Project Name:

PO. #:

City/State Collected:

Markham IL

Analysis/Container/Preservative

Total Chrome, lead

TCLD Chrome, lead

Chain of Custody

Page 2 of 2

Prepared by: T. Vitzthum

CoCode

(lab use only)

Template/Prelogin

Shipped Via:

Remarks/Containment

Sample # (lab only)

11D0877

27, 28

29, 30

31, 32

33, 34

Matrix

SS - Soil/Solid

GW - Groundwater

DW - Drinking Water

WW - Waste Water

OT - Other

Received by (Signature)

Received by (Signature)

Received for lab by (Signature)

Time: 1:00

Time: _____

Time: _____

Date: 4-21-11

Date: 4-21-11

Date: _____

Samples returned via:

Fed Ex

Courier

UPS

Temp:

Date:

Bottles Received:

Time:

pH

Flow

Temp

Other

Condition (lab use only)

pH Checked

NCF:

42



Partial
4/30/2011

April 30, 2011

Environmental Restoration
16660 South Canal Street
South Holland, IL 60437-

Work Order No.: 11D0912

Re: Markham Dump

Dear Toby Viehweg:

Microbac Laboratories, Inc. - Chicagoland Division received 2 sample(s) on 4/22/2011 1:40:00PM for the analyses presented in the following report as Work Order 11D0912.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Jeff Loewe, Division Manager at jeff.loewe@microbac.com. You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President at james.nokes@microbac.com.

Sincerely,

DRAFT REPORT
DATA SUBJECT TO CHANGE



Partial
4/30/2011

WORK ORDER SAMPLE SUMMARY

Date: *Saturday, April 30, 2011*

Client: Environmental Restoration

Project: Markham Dump

Lab Order: 11D0912

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
11D0912-01	DRAFT: MD-SP-01		04/22/2011 11:00	4/22/2011 1:40:00PM
11D0912-02	DRAFT: MD-SP-01		04/22/2011 11:00	4/22/2011 1:40:00PM



Partial
4/30/2011

CASE NARRATIVE

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Project: Markham Dump

Lab Order: 11D0912

The Matrix Spike and Matrix Spike Duplicate performed on the MD-SP-01 sample failed the precision criteria for Phenolics. A Post Digestion Spike was performed and did not meet the acceptance criteria. This data is indicative of matrix interference.

B - the Method Blank associated with the MD-SP-01 sample contained Chromium and Lead at a level above the reporting limit. This is considered insignificant, as the concentration in the sample was more than ten-times that measured in the blank.



Partial
4/30/2011

Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: DRAFT: MD-SP-01

Sample Description:

Matrix: Solid

Work Order/ID: 11D0912-01

Sampled: 04/22/2011 11:00

Received: 04/22/2011 13:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
----------	----	--------	----	------	-------	----	----------

		Method: SW-846 8082				Analyst: clr	
Polychlorinated Biphenyls		Prep Method: SW846 3550B				Prep Date/Time: 04/25/2011 12:26	
Aroclor 1016	A	ND	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1221	A	ND	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1232	A	ND	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1242	A	ND	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1248	A	700	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1254	A	ND	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1260	A	390	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1262	A	ND	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1268	A	ND	170		µg/Kg	5	04/26/2011 22:54
Total PCB's	A	1100	170		µg/Kg	5	04/26/2011 22:54
Surr: Decachlorobiphenyl	S	125.00	38-128		%REC	5	04/26/2011 22:54
Surr: Tetrachloro-m-xylene	S	100.00	40-130		%REC	5	04/26/2011 22:54

		Method: 1311/8260B				Analyst: jln	
TCLP VOA Zero Head Extraction		Prep Method: SW-846 1311/<noprep>				Prep Date/Time: 04/26/2011 08:25	
1,1-Dichloroethene	A	ND	0.050		mg/L	10	04/26/2011 12:44
1,2-Dichloroethane	A	ND	0.050		mg/L	10	04/26/2011 12:44
2-Butanone	A	ND	0.10		mg/L	10	04/26/2011 12:44
Benzene	A	ND	0.050		mg/L	10	04/26/2011 12:44
Carbon tetrachloride	A	ND	0.050		mg/L	10	04/26/2011 12:44
Chlorobenzene	A	ND	0.050		mg/L	10	04/26/2011 12:44
Chloroform	A	ND	0.050		mg/L	10	04/26/2011 12:44
Tetrachloroethene	A	ND	0.050		mg/L	10	04/26/2011 12:44
Trichloroethene	A	ND	0.050		mg/L	10	04/26/2011 12:44
Vinyl chloride	A	ND	0.020		mg/L	10	04/26/2011 12:44
1,4-Dichlorobenzene	B	ND	0.10		mg/L	10	04/26/2011 12:44
Surr: 1,2-Dichloroethane-d4	S	84.30	74.5-132		%REC	10	04/26/2011 12:44
Surr: 4-Bromofluorobenzene	S	102.00	80-120		%REC	10	04/26/2011 12:44
Surr: Dibromofluoromethane	S	101.00	80-120		%REC	10	04/26/2011 12:44
Surr: Toluene-d8	S	93.50	80-120		%REC	10	04/26/2011 12:44

		Method: 1311/7470A				Analyst: SA	
TCLP Mercury by CVAA		Prep Method: /SW-846 7470				Prep Date/Time: 04/25/2011 09:25	
Mercury	A	ND	0.00100		mg/L	1	04/25/2011 14:18

		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/25/2011 09:07	
Arsenic	A	ND	0.0100		mg/L	1	04/25/2011 14:59
Barium	A	0.960	0.500		mg/L	1	04/25/2011 14:59
Cadmium	A	0.181	0.00200		mg/L	1	04/25/2011 14:59
Chromium	A	0.00590	0.00300		mg/L	1	04/25/2011 14:59
Lead	A	1.89	0.00750		mg/L	1	04/25/2011 14:59
Selenium	A	ND	0.0300		mg/L	1	04/25/2011 14:59



Partial
4/30/2011

Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration
Client Project: Markham Dump
Client Sample ID: DRAFT: MD-SP-01
Sample Description:
Matrix: Solid

Work Order/ID: 11D0912-01
Sampled: 04/22/2011 11:00
Received: 04/22/2011 13:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B Analyst: SA							
Prep Method: /SW846 3010A Prep Date/Time: 04/25/2011 09:07							
TCLP Metals by ICP							
Silver	A	ND	0.0100		mg/L	1	04/25/2011 14:59
Method: ASTM D92-90 Modified Analyst: TMG							
Prep Date/Time: 04/28/2011 17:26							
Ignitability (Open Cup)							
Ignitability	A	> 170	30		°F	1	04/28/2011 17:26
Method: SW-846 9095B Analyst: ABG							
Prep Date/Time: 04/25/2011 12:35							
Paint Filter							
Paint Filter	A	Pass	0.0		Pass/Fail	1	04/25/2011 12:49
Method: SW-846 9045C Analyst: ABG							
Prep Date/Time: 04/25/2011 14:55							
pH							
pH	A	7.58	2.00		pH Units	1	04/25/2011 15:03
Method: SW-846 9066 Analyst: EINIK							
Prep Method: Solid Phenolics Distillation Prep Date/Time: 04/27/2011 11:25							
Total Phenolics							
Phenolics, Total Recoverable	A	5.7	0.50		mg/Kg	1	04/27/2011 14:21
Method: Chapter 7/9014 Analyst: EINIK							
Prep Method: Solid Reactive CN Distillation Prep Date/Time: 04/27/2011 12:15							
Reactive Cyanide							
Reactive Cyanide	A	ND	10		mg/Kg	1	04/27/2011 16:36
Method: Chapter 7/9034 Analyst: ABG							
Prep Method: Solid Reactive Sulfide Distillation Prep Date/Time: 04/27/2011 12:15							
Reactive Sulfide							
Reactive Sulfide	A	ND	10		mg/Kg	1	04/27/2011 15:34



Partial
4/30/2011

Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: DRAFT: MD-SP-01

Sample Description:

Matrix: Solid

Work Order/ID: 11D0912-02

Sampled: 04/22/2011 11:00

Received: 04/22/2011 13:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	130	1.3	B	mg/Kg	10	04/28/2011 0:02
Lead	A	1800	3.3	B	mg/Kg	10	04/28/2011 0:02



Partial
4/30/2011

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed
mg/L	=	Milligrams per Liter (ppm)
mg/Kg	=	Milligrams per Kilogram (ppm)
U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
B	=	Detected in the associated method Blank at a concentration above the routine PQL/RL
D	=	Dilution performed on sample
ND	=	Not Detected at the Reporting Limit (or the Method Detection Limit, if used)
E	=	Value above quantitation range
H	=	Analyte was prepared and/or analyzed outside of the analytical method holding time
I	=	Matrix Interference
R	=	RPD outside accepted recovery limits
S	=	Spike recovery outside recovery limits
Surr	=	Surrogate
DF	=	Dilution Factor
RL	=	Reporting Limit
MDL	=	Method Detection Limit
NR	=	Not Recovered

ANALYTE TYPES: (AT)

A,B	=	Target Analyte
I	=	Internal Standard
M	=	Summation Analyte
S	=	Surrogate
T	=	Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

MBLK	=	Method Blank	ICSA	=	Interference Check Standard "A"
DUP	=	Method Duplicate	ICSAB	=	Interference Check Standard "AB"
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate
BS	=	Method Blank Spike	BSD	=	Method Blank Spike Duplicate
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank
ICV	=	Initial Calibration Verification	CCV	=	Continuing Calibration Verification
PDS	=	Post Digestion Spike	SD	=	Serial Dilution
OPR	=	Ongoing Precision and Recovery Standard			

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Kentucky EPPC for the analysis of samples applicable to the Underground Storage Tank program (lab #75)

North Carolina DENR for the environmental analysis for NPDES effluent, surface water, groundwater, and pretreatment regulations(certificate #597)

Wisconsin DNR for the chemical analysis of wastewater and solid waste (lab #998036710)



Partial
4/30/2011

COOLER INSPECTION

Client Name: Environmental Restoration

Date: Saturday, April 30, 2011

Date/Time Received: 04/22/2011 13:40

Work Order Number: 11D0912

Received by: Dave Bryant

Checklist completed by: 4/22/2011 1:57:00PM Dave Bryant

Reviewed by: 4/22/2011 KGF

Carrier Name: Microbac

Cooler ID: Default Cooler

Container/Temp Blank Temperature: 5.00°C

After-Hour Arrival?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Shipping container/cooler in good condition?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample containers?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
COC present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient client identification?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient sample collector information?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included a sample description?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC agrees with sample labels?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate matrix?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included date of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included time of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate number of containers?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples in proper container/bottle?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sample containers intact?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
All samples received within holding time?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
If the samples are preserved, are the preservatives identified?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	

If No, adjusted by? _____

COC included the requested analyses?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC signed when relinquished and received?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples received on ice?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples properly preserved?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Voa vials for aqueous samples have zero headspace?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>

Cooler Comments: _____

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.

Sample ID	Client Sample ID	Comments
11D0912-01	MD-SP-01	
11D0912-02	MD-SP-01	



April 30, 2011

Environmental Restoration
16660 South Canal Street
South Holland, IL 60437-

Work Order No.: 11D0950

Re: Markham Dump

Dear Toby Viehweg:

Microbac Laboratories, Inc. - Chicagoland Division received 2 sample(s) on 4/25/2011 2:22:00PM for the analyses presented in the following report as Work Order 11D0950.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Jeff Loewe, Division Manager at jeff.loewe@microbac.com. You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President at james.nokes@microbac.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Falvey", is written over a light blue horizontal line.

Kevin Falvey
Account Manager



WORK ORDER SAMPLE SUMMARY

Date: *Saturday, April 30, 2011***Client:** Environmental Restoration**Project:** Markham Dump**Lab Order:** 11D0950

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
11D0950-01	MD-YW		04/25/2011 11:00	4/25/2011 2:22:00PM
11D0950-02	MD-CEW		04/25/2011 11:00	4/25/2011 2:22:00PM



CASE NARRATIVE

Date: *Saturday, April 30, 2011*

Client: Environmental Restoration

Project: Markham Dump

Lab Order: 11D0950

The Matrix Spike and Matrix Spike Duplicate performed on the MD-CEW sample failed the accuracy criteria for Lead with a low bias. The precision criteria were met. A Post Digestion Spike was performed and the acceptance criteria was not met, indicating matrix interference.



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-YW

Sample Description:

Matrix: Aqueous

Work Order/ID: 11D0950-01

Sampled: 04/25/2011 11:00

Received: 04/25/2011 14:22

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
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Method: SW-846 6010B				Analyst: SA			
Total Metals by ICP		Prep Method: SW846 3010A		Prep Date/Time: 04/26/2011 08:14			
Arsenic	A	ND	0.010		mg/L	1	04/27/2011 16:48
Barium	A	10	0.0020		mg/L	1	04/27/2011 16:48
Cadmium	A	0.020	0.0020		mg/L	1	04/27/2011 16:48
Chromium	A	22	0.0030		mg/L	1	04/27/2011 16:48
Lead	A	100	0.0075		mg/L	1	04/27/2011 16:48
Selenium	A	ND	0.030		mg/L	1	04/27/2011 16:48
Silver	A	ND	0.010		mg/L	1	04/27/2011 16:48

Method: SW-846 7470A					Analyst: RPL		
Prep Method: SW-846 7470					Prep Date/Time: 04/26/2011 08:31		
Total Mercury by CVAA							
Mercury	A	0.00067	0.00025		mg/L	1	04/27/2011 16:01

Method: SW-846 7196A					Analyst: EINIK		
Hexavalent Chromium					Prep Date/Time: 04/26/2011 08:15		
Chromium, Hexavalent	A	0.40	0.020		mg/L	2	04/26/2011 9:09



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-CEW

Sample Description:

Matrix: Aqueous

Work Order/ID: 11D0950-02

Sampled: 04/25/2011 11:00

Received: 04/25/2011 14:22

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
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Total Metals by ICP		Method: SW-846 6010B				Analyst: SA	
		Prep Method: SW846 3010A				Prep Date/Time: 04/26/2011 08:14	
Arsenic	A	ND	0.010		mg/L	1	04/27/2011 16:54
Barium	A	0.64	0.0020		mg/L	1	04/27/2011 16:54
Cadmium	A	0.0060	0.0020		mg/L	1	04/27/2011 16:54
Chromium	A	0.33	0.0030		mg/L	1	04/27/2011 16:54
Lead	A	7.2	0.0075		mg/L	1	04/27/2011 16:54
Selenium	A	ND	0.030		mg/L	1	04/27/2011 16:54
Silver	A	ND	0.010		mg/L	1	04/27/2011 16:54

Total Mercury by CVAA		Method: SW-846 7470A				Analyst: RPL	
		Prep Method: SW-846 7470				Prep Date/Time: 04/26/2011 08:31	
Mercury	A	0.0020	0.00025		mg/L	1	04/27/2011 16:05

Hexavalent Chromium		Method: SW-846 7196A				Analyst: EINIK	
						Prep Date/Time: 04/26/2011 08:15	
Chromium, Hexavalent	A	ND	0.010		mg/L	1	04/26/2011 8:39

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed
mg/L	=	Milligrams per Liter (ppm)
mg/Kg	=	Milligrams per Kilogram (ppm)
U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
B	=	Detected in the associated method Blank at a concentration above the routine PQL/RL
D	=	Dilution performed on sample
ND	=	Not Detected at the Reporting Limit (or the Method Detection Limit, if used)
E	=	Value above quantitation range
H	=	Analyte was prepared and/or analyzed outside of the analytical method holding time
I	=	Matrix Interference
R	=	RPD outside accepted recovery limits
S	=	Spike recovery outside recovery limits
Surr	=	Surrogate
DF	=	Dilution Factor
RL	=	Reporting Limit
MDL	=	Method Detection Limit
NR	=	Not Recovered

ANALYTE TYPES: (AT)

A,B	=	Target Analyte
I	=	Internal Standard
M	=	Summation Analyte
S	=	Surrogate
T	=	Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

MBLK	=	Method Blank	ICSA	=	Interference Check Standard "A"
DUP	=	Method Duplicate	ICSAB	=	Interference Check Standard "AB"
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate
BS	=	Method Blank Spike	BSD	=	Method Blank Spike Duplicate
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank
ICV	=	Initial Calibration Verification	CCV	=	Continuing Calibration Verification
PDS	=	Post Digestion Spike	SD	=	Serial Dilution
OPR	=	Ongoing Precision and Recovery Standard			

CERTIFICATIONS

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

The American Association for Laboratory Accreditation [A2LA] for Biological Testing, ISO/IEC 17025 (Certificate# 3045.01)

The American Association for Laboratory Accreditation [A2LA] for Environmental Department of Defense Testing, ISO/IEC 17025 (Certificate# 3045.02)

Illinois EPA for the analysis wastewater and solid waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (accreditation #200064)

Illinois Department of Public Health for the microbiological analysis of drinking water (registry #1755266)

Indiana DEM approved support laboratory for solid waste and wastewater analyses

Indiana SDH for the chemical analysis of drinking water (lab #C-45-03)

Indiana SDH for the microbiological analysis of drinking water (lab #M-45-8)

Kansas Department of Health and Environment for the analysis of drinking water, wastewater, and solid hazardous waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (Certificate No. E-10397)

Kentucky EPPC for the analysis of samples applicable to the Underground Storage Tank program (lab #75)

North Carolina DENR for the environmental analysis for NPDES effluent, surface water, groundwater, and pretreatment regulations(certificate #597)

Wisconsin DNR for the chemical analysis of wastewater and solid waste (lab #998036710)



COOLER INSPECTION

Client Name: Environmental Restoration

Date: Saturday, April 30, 2011
Date/Time Received: 04/25/2011 14:22

Work Order Number: 11D0950

Received by: Dave Bryant

Checklist completed by: 4/25/2011 2:33:00PM Dave Bryant

Reviewed by: 4/25/2011 KGF

Carrier Name: Microbac

Cooler ID: Default Cooler

Container/Temp Blank Temperature: 6.00°C

After-Hour Arrival?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Shipping container/cooler in good condition?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample containers?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
COC present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient client identification?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient sample collector information?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included a sample description?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC agrees with sample labels?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate matrix?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included date of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included time of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate number of containers?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples in proper container/bottle?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sample containers intact?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
All samples received within holding time?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
If the samples are preserved, are the preservatives identified?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	

If No, adjusted by? _____

COC included the requested analyses?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC signed when relinquished and received?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples received on ice?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples properly preserved?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Voa vials for aqueous samples have zero headspace?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>

Cooler Comments: _____

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.

Sample ID	Client Sample ID	Comments
11D0950-01	MD-YW	
11D0950-02	MD-CEW	



July 6, 2011

Environmental Restoration
16660 South Canal Street
South Holland, IL 60437-

Work Order No.: 11F1577

Re: Markham

Dear Toby Viehweg:

Microbac Laboratories, Inc. - Chicagoland Division received 22 sample(s) on 6/27/2011 9:40:00AM for the analyses presented in the following report as Work Order 11F1577.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

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We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Jeff Loewe, Division Manager at jeff.loewe@microbac.com. You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President at james.nokes@microbac.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Falvey", is written over a light blue horizontal line.

Kevin Falvey
Account Manager

WORK ORDER SAMPLE SUMMARY
Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Project: Markham

Lab Order: 11F1577

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received	
11F1577-01	A1	0-3"	06/24/2011 10:20	6/27/2011	9:40:00AM
11F1577-02	A2	0-3"	06/24/2011 10:22	6/27/2011	9:40:00AM
11F1577-03	A3	0-3"	06/24/2011 10:25	6/27/2011	9:40:00AM
11F1577-04	A5	0-3"	06/24/2011 10:35	6/27/2011	9:40:00AM
11F1577-05	B1	0-3"	06/24/2011 10:15	6/27/2011	9:40:00AM
11F1577-06	B2	0-3"	06/24/2011 10:55	6/27/2011	9:40:00AM
11F1577-07	B3	0-3"	06/24/2011 10:50	6/27/2011	9:40:00AM
11F1577-08	B5	0-3"	06/24/2011 10:45	6/27/2011	9:40:00AM
11F1577-09	C1	0-3"	06/24/2011 10:00	6/27/2011	9:40:00AM
11F1577-10	C2	0-3"	06/24/2011 11:03	6/27/2011	9:40:00AM
11F1577-11	C3	0-3"	06/24/2011 11:10	6/27/2011	9:40:00AM
11F1577-12	C4	0-3"	06/24/2011 11:15	6/27/2011	9:40:00AM
11F1577-13	C5	0-3"	06/24/2011 11:20	6/27/2011	9:40:00AM
11F1577-14	D1	0-3"	06/24/2011 09:50	6/27/2011	9:40:00AM
11F1577-15	D2	0-3"	06/24/2011 11:40	6/27/2011	9:40:00AM
11F1577-16	D3	0-3"	06/24/2011 11:30	6/27/2011	9:40:00AM
11F1577-17	E1	0-3"	06/24/2011 09:40	6/27/2011	9:40:00AM
11F1577-18	E2	0-3"	06/24/2011 11:45	6/27/2011	9:40:00AM
11F1577-19	E3	0-3"	06/24/2011 11:50	6/27/2011	9:40:00AM
11F1577-20	E4	0-3"	06/24/2011 11:55	6/27/2011	9:40:00AM
11F1577-21	E5	0-3"	06/24/2011 12:45	6/27/2011	9:40:00AM
11F1577-22	D5	0-3"	06/24/2011 15:13	6/27/2011	9:40:00AM



CASE NARRATIVE

Date: *Wednesday, July 6, 2011*

Client: Environmental Restoration

Project: Markham

Lab Order: 11F1577

The Matrix Spike and Matrix Spike Duplicate performed on the D2 sample failed the accuracy criteria for Chromium and Lead. This bias is due to the high indigenous analyte concentration (relative to the spike amount).



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: A1

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-01

Sampled: 06/24/2011 10:20

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 6010B			Analyst: SA				
Prep Method: SW846 3050B			Prep Date/Time: 06/28/2011 08:15				
Total Metals by ICP							
Chromium	A	110	0.14		mg/Kg	1	06/28/2011 21:58
Lead	A	18000	35		mg/Kg	100	06/29/2011 13:48



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: A2

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-02

Sampled: 06/24/2011 10:22

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 06/28/2011 08:15	
Chromium	A	130	0.14		mg/Kg	1	06/28/2011 22:04
Lead	A	32000	34		mg/Kg	100	06/29/2011 13:53



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: A3

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-03

Sampled: 06/24/2011 10:25

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 06/28/2011 08:15	
Chromium	A	57	0.10		mg/Kg	1	06/28/2011 22:31
Lead	A	5600	0.26		mg/Kg	1	06/28/2011 22:31



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: A5

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-04

Sampled: 06/24/2011 10:35

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 6010B			Analyst: SA				
Prep Method: SW846 3050B			Prep Date/Time: 06/28/2011 08:15				
Total Metals by ICP							
Chromium	A	25	0.15		mg/Kg	1	06/28/2011 22:37
Lead	A	730	0.37		mg/Kg	1	06/28/2011 22:37



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: B1

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-05

Sampled: 06/24/2011 10:15

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 6010B			Analyst: SA				
Prep Method: SW846 3050B			Prep Date/Time: 06/28/2011 08:15				
Total Metals by ICP							
Chromium	A	52	0.14		mg/Kg	1	06/28/2011 22:43
Lead	A	1700	0.35		mg/Kg	1	06/28/2011 22:43



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: B2

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-06

Sampled: 06/24/2011 10:55

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 06/28/2011 08:15	
Chromium	A	50	0.14		mg/Kg	1	06/28/2011 22:48
Lead	A	7500	0.35		mg/Kg	1	06/28/2011 22:48



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: B3

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-07

Sampled: 06/24/2011 10:50

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 6010B			Analyst: SA				
Prep Method: SW846 3050B			Prep Date/Time: 06/28/2011 08:15				
Total Metals by ICP							
Chromium	A	19	0.13		mg/Kg	1	06/28/2011 22:54
Lead	A	2900	0.33		mg/Kg	1	06/28/2011 22:54



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: B5

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-08

Sampled: 06/24/2011 10:45

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 6010B			Analyst: SA				
Prep Method: SW846 3050B			Prep Date/Time: 06/28/2011 08:15				
Total Metals by ICP							
Chromium	A	72	0.14		mg/Kg	1	06/28/2011 22:59
Lead	A	570	0.36		mg/Kg	1	06/28/2011 22:59



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: C1

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-09

Sampled: 06/24/2011 10:00

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 06/28/2011 08:15	
Chromium	A	150	0.13		mg/Kg	1	06/28/2011 23:05
Lead	A	5000	0.32		mg/Kg	1	06/28/2011 23:05



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: C2

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-10

Sampled: 06/24/2011 11:03

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 6010B			Analyst: SA				
Prep Method: SW846 3050B			Prep Date/Time: 06/28/2011 08:15				
Total Metals by ICP							
Chromium	A	830	0.13		mg/Kg	1	06/28/2011 23:11
Lead	A	11000	0.32		mg/Kg	1	06/28/2011 23:11



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: C3

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-11

Sampled: 06/24/2011 11:10

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 06/28/2011 08:15	
Chromium	A	220	0.15		mg/Kg	1	06/28/2011 23:17
Lead	A	8600	0.38		mg/Kg	1	06/28/2011 23:17



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: C4

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-12

Sampled: 06/24/2011 11:15

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 06/28/2011 08:15	
Chromium	A	54	0.13		mg/Kg	1	06/28/2011 23:22
Lead	A	1300	0.33		mg/Kg	1	06/28/2011 23:22



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: C5

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-13

Sampled: 06/24/2011 11:20

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 6010B			Analyst: SA				
Prep Method: SW846 3050B			Prep Date/Time: 06/28/2011 08:15				
Total Metals by ICP							
Chromium	A	35	0.15		mg/Kg	1	06/28/2011 23:49
Lead	A	600	0.37		mg/Kg	1	06/28/2011 23:49



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: D1

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-14

Sampled: 06/24/2011 9:50

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 06/28/2011 08:15	
Chromium	A	430	0.15		mg/Kg	1	06/28/2011 23:55
Lead	A	5500	0.37		mg/Kg	1	06/28/2011 23:55



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: D2

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-15

Sampled: 06/24/2011 11:40

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 06/28/2011 11:35	
Chromium	A	450	0.14		mg/Kg	1	06/29/2011 0:33
Lead	A	5100	0.34		mg/Kg	1	06/29/2011 0:33



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: D3

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-16

Sampled: 06/24/2011 11:30

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 06/28/2011 11:35	
Chromium	A	120	0.14		mg/Kg	1	06/29/2011 14:15
Lead	A	2900	0.35		mg/Kg	1	06/29/2011 14:15



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: E1

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-17

Sampled: 06/24/2011 9:40

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 06/28/2011 11:35	
Chromium	A	560	0.13		mg/Kg	1	06/29/2011 14:21
Lead	A	3500	0.33		mg/Kg	1	06/29/2011 14:21



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: E2

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-18

Sampled: 06/24/2011 11:45

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 06/28/2011 11:35	
Chromium	A	300	0.14		mg/Kg	1	06/29/2011 14:26
Lead	A	2800	0.35		mg/Kg	1	06/29/2011 14:26



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: E3

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-19

Sampled: 06/24/2011 11:50

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 6010B			Analyst: SA				
Prep Method: SW846 3050B			Prep Date/Time: 06/28/2011 11:35				
Total Metals by ICP							
Chromium	A	120	0.15		mg/Kg	1	06/30/2011 18:03
Lead	A	2000	0.38		mg/Kg	1	06/29/2011 14:53



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: E4

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-20

Sampled: 06/24/2011 11:55

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 6010B			Analyst: SA				
Prep Method: SW846 3050B			Prep Date/Time: 06/28/2011 11:35				
Total Metals by ICP							
Chromium	A	140	0.13		mg/Kg	1	06/30/2011 18:08
Lead	A	1500	0.33		mg/Kg	1	06/29/2011 14:58



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: E5

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-21

Sampled: 06/24/2011 12:45

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 06/28/2011 11:35	
Chromium	A	180	0.13		mg/Kg	1	06/30/2011 18:14
Lead	A	1600	0.32		mg/Kg	1	06/29/2011 15:04



Analytical Results

Date: Wednesday, July 6, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: D5

Sample Description: 0-3"

Matrix: Solid

Work Order/ID: 11F1577-22

Sampled: 06/24/2011 15:13

Received: 06/27/2011 9:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 6010B			Analyst: SA				
Prep Method: SW846 3050B			Prep Date/Time: 06/28/2011 11:35				
Chromium	A	40	0.13		mg/Kg	1	06/30/2011 18:19
Lead	A	540	0.33		mg/Kg	1	06/29/2011 15:10

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed
mg/L	=	Milligrams per Liter (ppm)
mg/Kg	=	Milligrams per Kilogram (ppm)
U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
B	=	Detected in the associated method Blank at a concentration above the routine PQL/RL
D	=	Dilution performed on sample
ND	=	Not Detected at the Reporting Limit (or the Method Detection Limit, if used)
E	=	Value above quantitation range
H	=	Analyte was prepared and/or analyzed outside of the analytical method holding time
I	=	Matrix Interference
R	=	RPD outside accepted recovery limits
S	=	Spike recovery outside recovery limits
Surr	=	Surrogate
DF	=	Dilution Factor
RL	=	Reporting Limit
MDL	=	Method Detection Limit
NR	=	Not Recovered

ANALYTE TYPES: (AT)

A,B	=	Target Analyte
I	=	Internal Standard
M	=	Summation Analyte
S	=	Surrogate
T	=	Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

MBLK	=	Method Blank	ICSA	=	Interference Check Standard "A"
DUP	=	Method Duplicate	ICSAB	=	Interference Check Standard "AB"
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate
BS	=	Method Blank Spike	BSD	=	Method Blank Spike Duplicate
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank
ICV	=	Initial Calibration Verification	CCV	=	Continuing Calibration Verification
PDS	=	Post Digestion Spike	SD	=	Serial Dilution
OPR	=	Ongoing Precision and Recovery Standard			

CERTIFICATIONS

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

The American Association for Laboratory Accreditation [A2LA] for Biological Testing, ISO/IEC 17025 (Certificate# 3045.01)

The American Association for Laboratory Accreditation [A2LA] for Environmental Department of Defense Testing, ISO/IEC 17025 (Certificate# 3045.02)

Illinois EPA for the analysis wastewater and solid waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (accreditation #200064)

Illinois Department of Public Health for the microbiological analysis of drinking water (registry #1755266)

Indiana DEM approved support laboratory for solid waste and wastewater analyses

Indiana SDH for the chemical analysis of drinking water (lab #C-45-03)

Indiana SDH for the microbiological analysis of drinking water (lab #M-45-8)

Kansas Department of Health and Environment for the analysis of drinking water, wastewater, and solid hazardous waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (Certificate No. E-10397)

Kentucky EPPC for the analysis of samples applicable to the Underground Storage Tank program (lab #75)

North Carolina DENR for the environmental analysis for NPDES effluent, surface water, groundwater, and pretreatment regulations(certificate #597)

Wisconsin DNR for the chemical analysis of wastewater and solid waste (lab #998036710)

COOLER INSPECTION

Client Name: Environmental Restoration

Work Order Number: 11F1577

Checklist completed by: 6/27/2011 2:38:00PM Dave Bryant

Date: Wednesday, July 6, 2011

Date/Time Received: 06/27/2011 09:40

Received by: Dave Bryant

Reviewed by: 6/27/2011 KGF

Carrier Name: Microbac

Cooler ID: Default Cooler

Container/Temp Blank Temperature: 5.00°C

After-Hour Arrival?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Shipping container/cooler in good condition?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample containers?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
COC present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient client identification?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient sample collector information?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included a sample description?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC agrees with sample labels?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate matrix?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included date of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included time of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate number of containers?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples in proper container/bottle?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sample containers intact?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
All samples received within holding time?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
If the samples are preserved, are the preservatives identified?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	

If No, adjusted by? _____

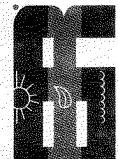
COC included the requested analyses?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC signed when relinquished and received?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples received on ice?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples properly preserved?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Voa vials for aqueous samples have zero headspace?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>

Cooler Comments: _____

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.



Sample ID	Client Sample ID	Comments
11F1577-01	A1	
11F1577-02	A2	
11F1577-03	A3	
11F1577-04	A5	
11F1577-05	B1	
11F1577-06	B2	
11F1577-07	B3	
11F1577-08	B5	
11F1577-09	C1	
11F1577-10	C2	
11F1577-11	C3	
11F1577-12	C4	
11F1577-13	C5	
11F1577-14	D1	
11F1577-15	D2	
11F1577-16	D3	
11F1577-17	E1	
11F1577-18	E2	
11F1577-19	E3	
11F1577-20	E4	
11F1577-21	E5	
11F1577-22	D5	



ENVIRONMENTAL RESTORATION LLC

1666 Fabick Drive
Fenton, MO 63026
(636) 227-7477
Fax (636) 227-6447

Alternate billing information:

Report to: **TV 15HWEQ**
Email to: **T.V.15HWEQ@erllc.com**
City/State Collected: **Markham IL**

Project Name: **Markham Dump**
P.O. #:

Client: **312 446 6325**
Site/Facility ID #:

Rush (Lab MUST Be Notified)
Same Day _____
Next Day _____
Two Day _____

Date Results Needed:
Email? _____ No _____ Yes _____
Fax? _____ No _____ Yes _____
No. of Containers

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time
A1	Comp	Soil	0-3"	6-24-11	1020
A2					1022
A3					1025
B1					1035
B2					1015
B3					1055
C1					1050
C2					1045
C3					1000
C4					1103
C5					1110
D1					1115
D2					1120
					0950
					1140

*Matrix SS - Soil/Solid GW - Groundwater WW - Wastewater DW - Drinking Water OT - Other

Received by (Signature) **[Signature]** Date: **6-27-11** Time: **0810**
Received by (Signature) **[Signature]** Date: **6-27-11** Time: **0440**
Received by (Signature) **[Signature]** Date: **6-27-11** Time: **0440**

Samples returned via: ☐ UPS ☐ Fed Ex ☐ Courier
Temp: **52°F** Bottles Received: **52°F**
Date: **6/27/11** Time: **0910**

Analysis/Container/Preservative

Chain of Custody Page **1** of **2**

Prepared by: **11F1577**

CoCode (lab use only)

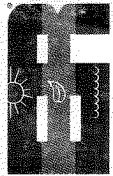
Template/Prelogin

Shipped Via:

Remarks/Containment Sample # (lab only)

Condition (lab use only)

pH Checked NCF:



ENVIRONMENTAL RESTORATION, LLC

1666 Fabick Drive
Fenton, MO 63026
(636) 227-7477
Fax (636) 227-6447

Alternate billing information:

Report to: **TV UCHWEN**
Email to: **tv.uchwen@erllc.com**
City/State Collected: **Markham IL**

Project Name: **Markham Dump**
P.O. #:

Client: **USEPA**
Site/Facility ID #:

Date Results Needed:
Email? ☐ No ☐ Yes
Fax? ☐ No ☐ Yes

(Lab MUST Be Notified)
Same Day ☐ Next Day ☐ Two Day ☐

Collected by (signature): **J. Gray**
Packed on ice ☒

Phone:
Fax:
Collected by: **L. Gray**

Rush ☐ (Lab MUST Be Notified)
Same Day ☐ Next Day ☐ Two Day ☐

Sample ID

Comp/Grab

Matrix*

Depth

Date

Time

No. of Containers

Remarks/Containerment

Sample # (lab use only)

CoCode (lab use only)

Template/Prelogin

Shipped Via:

Prepared by:

Chain of Custody

Page 2 of 2

Analysis/Container/Preservative

Temp

Flow

Condition (lab use only)

pH Checked

NCF:

Time: 0940

Date: 6/27/11

Temp: 52.0

Fed Ex ☐ Courier ☐

UPS ☐

Bottles Received:

Received for lab by (Signature): **[Signature]**

Received for lab by (Signature): **[Signature]**



May 13, 2011

Environmental Restoration
16660 South Canal Street
South Holland, IL 60437-

Work Order No.: 11D1129

Re: Markham Dump

Dear Toby Viehweg:

Microbac Laboratories, Inc. - Chicagoland Division received 14 sample(s) on 4/28/2011 4:35:00PM for the analyses presented in the following report as Work Order 11D1129.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Jeff Loewe, Division Manager at jeff.loewe@microbac.com. You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President at james.nokes@microbac.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Falvey", is written over a light blue horizontal line.

Kevin Falvey
Account Manager

**WORK ORDER SAMPLE SUMMARY****Date:** *Friday, May 13, 2011***Client:** Environmental Restoration**Project:** Markham Dump**Lab Order:** 11D1129

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
11D1129-01	MD-CE		04/28/2011 11:00	4/28/2011 4:35:00PM
11D1129-02	MD-CE		04/28/2011 11:00	4/28/2011 4:35:00PM
11D1129-03	MD-FILL		04/28/2011 11:00	4/28/2011 4:35:00PM
11D1129-04	MD-FILL		04/28/2011 11:00	4/28/2011 4:35:00PM
11D1129-05	MD-1-2		04/28/2011 11:00	4/28/2011 4:35:00PM
11D1129-06	MD-1-2		04/28/2011 11:00	4/28/2011 4:35:00PM
11D1129-07	MD-1-3		04/28/2011 11:00	4/28/2011 4:35:00PM
11D1129-08	MD-1-3		04/28/2011 11:00	4/28/2011 4:35:00PM
11D1129-09	MD-4-1		04/28/2011 11:00	4/28/2011 4:35:00PM
11D1129-10	MD-4-1		04/28/2011 11:00	4/28/2011 4:35:00PM
11D1129-11	MD-4-2		04/28/2011 11:00	4/28/2011 4:35:00PM
11D1129-12	MD-4-2		04/28/2011 11:00	4/28/2011 4:35:00PM
11D1129-13	MD-4-3		04/28/2011 11:00	4/28/2011 4:35:00PM
11D1129-14	MD-4-3		04/28/2011 11:00	4/28/2011 4:35:00PM



CASE NARRATIVE

Date: Friday, May 13, 2011

Client: Environmental Restoration

Project: Markham Dump

Lab Order: 11D1129

The Matrix Spike and Matrix Spike Duplicate performed on the MD-CE sample failed the accuracy criteria for Mercury. This bias is due to the high indigenous analyte concentration (relative to the spike amount).

B - the Method Blank associated with the MD-4-3 sample contained Chromium at a level above the reporting limit. This is considered insignificant, as the concentration in the sample was more than ten-times that measured in the blank.

The Matrix Spike and Matrix Spike Duplicate performed on the MD-4-3 sample failed the accuracy criteria for Lead. This bias is due to the high indigenous analyte concentration (relative to the spike amount).



Analytical Results

Date: Friday, May 13, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-CE

Sample Description:

Matrix: Solid

Work Order/ID: 11D1129-01

Sampled: 04/28/2011 11:00

Received: 04/28/2011 16:35

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
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Method: SW-846 6010B

Analyst: SA

Total Metals by ICP

Prep Method: SW846 3050B

Prep Date/Time: 05/11/2011 08:55

Arsenic	A	7.4	0.49		mg/Kg	1	05/11/2011 18:16
Barium	A	150	0.098		mg/Kg	1	05/11/2011 18:16
Cadmium	A	3.7	0.098		mg/Kg	1	05/11/2011 18:16
Chromium	A	33	0.15		mg/Kg	1	05/11/2011 18:16
Lead	A	5000	0.37		mg/Kg	1	05/11/2011 18:16
Selenium	A	ND	1.5		mg/Kg	1	05/11/2011 18:16
Silver	A	0.49	0.49		mg/Kg	1	05/11/2011 18:16

Method: SW-846 7471A

Analyst: SA

Total Mercury by CVAA

Prep Method: SW-846 7471

Prep Date/Time: 05/11/2011 09:30

Mercury	A	1.2	0.36		mg/Kg	10	05/11/2011 17:17
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Analytical Results

Date: Friday, May 13, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-CE

Sample Description:

Matrix: Solid

Work Order/ID: 11D1129-02

Sampled: 04/28/2011 11:00

Received: 04/28/2011 16:35

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/7470A				Analyst: RPL	
TCLP Mercury by CVAA		Prep Method: /SW-846 7470				Prep Date/Time: 05/13/2011 09:18	
Mercury	A	ND	0.00108		mg/L	1	05/13/2011 12:30
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/13/2011 08:43	
Arsenic	A	ND	0.0100		mg/L	1	05/13/2011 12:40
Barium	A	0.825	0.500		mg/L	1	05/13/2011 12:40
Cadmium	A	0.0951	0.00200		mg/L	1	05/13/2011 12:40
Chromium	A	0.00810	0.00300		mg/L	1	05/13/2011 12:40
Lead	A	20.2	0.00750		mg/L	1	05/13/2011 12:40
Selenium	A	ND	0.0300		mg/L	1	05/13/2011 12:40
Silver	A	ND	0.0100		mg/L	1	05/13/2011 12:40



Analytical Results

Date: Friday, May 13, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-FILL

Sample Description:

Matrix: Solid

Work Order/ID: 11D1129-03

Sampled: 04/28/2011 11:00

Received: 04/28/2011 16:35

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
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Method: SW-846 6010B

Analyst: SA

Total Metals by ICP

Prep Method: SW846 3050B

Prep Date/Time: 05/11/2011 08:55

Arsenic	A	5.9	0.49		mg/Kg	1	05/11/2011 18:22
Barium	A	43	0.098		mg/Kg	1	05/11/2011 18:22
Cadmium	A	0.23	0.098		mg/Kg	1	05/11/2011 18:22
Chromium	A	14	0.15		mg/Kg	1	05/11/2011 18:22
Lead	A	16	0.37		mg/Kg	1	05/11/2011 18:22
Selenium	A	ND	1.5		mg/Kg	1	05/11/2011 18:22
Silver	A	ND	0.49		mg/Kg	1	05/11/2011 18:22

Method: SW-846 7471A

Analyst: SA

Total Mercury by CVAA

Prep Method: SW-846 7471

Prep Date/Time: 05/11/2011 09:30

Mercury	A	ND	0.036		mg/Kg	1	05/11/2011 16:34
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Analytical Results

Date: Friday, May 13, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-FILL

Sample Description:

Matrix: Solid

Work Order/ID: 11D1129-04

Sampled: 04/28/2011 11:00

Received: 04/28/2011 16:35

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/7470A				Analyst: RPL	
TCLP Mercury by CVAA		Prep Method: /SW-846 7470				Prep Date/Time: 05/13/2011 09:18	
Mercury	A	ND	0.00100		mg/L	1	05/13/2011 12:34
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/13/2011 08:43	
Arsenic	A	ND	0.0100		mg/L	1	05/13/2011 12:46
Barium	A	ND	0.500		mg/L	1	05/13/2011 12:46
Cadmium	A	ND	0.00200		mg/L	1	05/13/2011 12:46
Chromium	A	ND	0.00300		mg/L	1	05/13/2011 12:46
Lead	A	ND	0.00750		mg/L	1	05/13/2011 12:46
Selenium	A	ND	0.0300		mg/L	1	05/13/2011 12:46
Silver	A	ND	0.0100		mg/L	1	05/13/2011 12:46



Analytical Results

Date: Friday, May 13, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-1-2

Sample Description:

Matrix: Solid

Work Order/ID: 11D1129-05

Sampled: 04/28/2011 11:00

Received: 04/28/2011 16:35

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
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Method: SW-846 6010B				Analyst: SA			
Prep Method: SW846 3050B				Prep Date/Time: 05/11/2011 08:55			
Total Metals by ICP							
Arsenic	A	18	0.50		mg/Kg	1	05/11/2011 18:27
Barium	A	950	0.099		mg/Kg	1	05/11/2011 18:27
Cadmium	A	13	0.099		mg/Kg	1	05/11/2011 18:27
Chromium	A	200	0.15		mg/Kg	1	05/11/2011 18:27
Lead	A	1900	0.37		mg/Kg	1	05/11/2011 18:27
Selenium	A	ND	1.5		mg/Kg	1	05/11/2011 18:27
Silver	A	3.0	0.50		mg/Kg	1	05/11/2011 18:27

Method: SW-846 7471A					Analyst: SA		
Prep Method: SW-846 7471					Prep Date/Time: 05/11/2011 09:30		
Total Mercury by CVAA							
Mercury	A	1.7	0.42		mg/Kg	10	05/11/2011 17:19



Analytical Results

Date: Friday, May 13, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-1-2

Sample Description:

Matrix: Solid

Work Order/ID: 11D1129-06

Sampled: 04/28/2011 11:00

Received: 04/28/2011 16:35

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/7470A				Analyst: RPL	
TCLP Mercury by CVAA		Prep Method: /SW-846 7470				Prep Date/Time: 05/13/2011 09:18	
Mercury	A	ND	0.00100		mg/L	1	05/13/2011 12:35
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/13/2011 08:43	
Arsenic	A	ND	0.0100		mg/L	1	05/13/2011 12:52
Barium	A	1.16	0.500		mg/L	1	05/13/2011 12:52
Cadmium	A	0.0852	0.00200		mg/L	1	05/13/2011 12:52
Chromium	A	0.00580	0.00300		mg/L	1	05/13/2011 12:52
Lead	A	0.400	0.00750		mg/L	1	05/13/2011 12:52
Selenium	A	ND	0.0300		mg/L	1	05/13/2011 12:52
Silver	A	ND	0.0100		mg/L	1	05/13/2011 12:52



Analytical Results

Date: Friday, May 13, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-1-3

Sample Description:

Matrix: Solid

Work Order/ID: 11D1129-07

Sampled: 04/28/2011 11:00

Received: 04/28/2011 16:35

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
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Method: SW-846 6010B				Analyst: SA			
Total Metals by ICP		Prep Method: SW846 3050B		Prep Date/Time: 05/11/2011 08:55			
Arsenic	A	11	0.48		mg/Kg	1	05/11/2011 18:33
Barium	A	350	0.095		mg/Kg	1	05/11/2011 18:33
Cadmium	A	17	0.095		mg/Kg	1	05/11/2011 18:33
Chromium	A	490	0.14		mg/Kg	1	05/11/2011 18:33
Lead	A	1800	0.36		mg/Kg	1	05/11/2011 18:33
Selenium	A	ND	1.4		mg/Kg	1	05/11/2011 18:33
Silver	A	2.2	0.48		mg/Kg	1	05/11/2011 18:33

Method: SW-846 7471A					Analyst: SA		
Prep Method: SW-846 7471					Prep Date/Time: 05/11/2011 09:30		
Total Mercury by CVAA							
Mercury	A	2.3	0.30		mg/Kg	10	05/11/2011 17:20



Analytical Results

Date: Friday, May 13, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-1-3

Sample Description:

Matrix: Solid

Work Order/ID: 11D1129-08

Sampled: 04/28/2011 11:00

Received: 04/28/2011 16:35

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/7470A Analyst: RPL							
Prep Method: /SW-846 7470 Prep Date/Time: 05/13/2011 09:18							
Mercury	A	ND	0.00100		mg/L	1	05/13/2011 12:36
Method: 1311/6010B Analyst: SA							
Prep Method: /SW846 3010A Prep Date/Time: 05/13/2011 08:43							
Arsenic	A	ND	0.0100		mg/L	1	05/13/2011 12:57
Barium	A	1.09	0.500		mg/L	1	05/13/2011 12:57
Cadmium	A	0.178	0.00200		mg/L	1	05/13/2011 12:57
Chromium	A	0.00550	0.00300		mg/L	1	05/13/2011 12:57
Lead	A	2.08	0.00750		mg/L	1	05/13/2011 12:57
Selenium	A	ND	0.0300		mg/L	1	05/13/2011 12:57
Silver	A	ND	0.0100		mg/L	1	05/13/2011 12:57



Analytical Results

Date: Friday, May 13, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-4-1

Sample Description:

Matrix: Solid

Work Order/ID: 11D1129-09

Sampled: 04/28/2011 11:00

Received: 04/28/2011 16:35

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
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Method: SW-846 6010B

Analyst: SA

Total Metals by ICP

Prep Method: SW846 3050B

Prep Date/Time: 05/11/2011 08:55

Arsenic	A	10	0.49		mg/Kg	1	05/11/2011 19:00
Barium	A	800	0.097		mg/Kg	1	05/11/2011 19:00
Cadmium	A	11	0.097		mg/Kg	1	05/11/2011 19:00
Chromium	A	120	0.15		mg/Kg	1	05/11/2011 19:00
Lead	A	7500	0.36		mg/Kg	1	05/11/2011 19:00
Selenium	A	ND	1.5		mg/Kg	1	05/11/2011 19:00
Silver	A	2.9	0.49		mg/Kg	1	05/11/2011 19:00

Method: SW-846 7471A

Analyst: SA

Total Mercury by CVAA

Prep Method: SW-846 7471

Prep Date/Time: 05/11/2011 09:30

Mercury	A	0.49	0.36		mg/Kg	10	05/11/2011 17:21
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Analytical Results

Date: Friday, May 13, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-4-1

Sample Description:

Matrix: Solid

Work Order/ID: 11D1129-10

Sampled: 04/28/2011 11:00

Received: 04/28/2011 16:35

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/7470A				Analyst: RPL	
TCLP Mercury by CVAA		Prep Method: /SW-846 7470				Prep Date/Time: 05/13/2011 09:18	
Mercury	A	ND	0.00100		mg/L	1	05/13/2011 12:38
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/13/2011 08:43	
Arsenic	A	ND	0.0100		mg/L	1	05/13/2011 13:03
Barium	A	1.01	0.500		mg/L	1	05/13/2011 13:03
Cadmium	A	0.159	0.00200		mg/L	1	05/13/2011 13:03
Chromium	A	0.0219	0.00300		mg/L	1	05/13/2011 13:03
Lead	A	51.8	0.00750		mg/L	1	05/13/2011 13:03
Selenium	A	ND	0.0300		mg/L	1	05/13/2011 13:03
Silver	A	ND	0.0100		mg/L	1	05/13/2011 13:03



Analytical Results

Date: Friday, May 13, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-4-2

Sample Description:

Matrix: Solid

Work Order/ID: 11D1129-11

Sampled: 04/28/2011 11:00

Received: 04/28/2011 16:35

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
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Method: SW-846 6010B				Analyst: SA			
Total Metals by ICP		Prep Method: SW846 3050B		Prep Date/Time: 05/11/2011 08:55			
Arsenic	A	9.4	0.46		mg/Kg	1	05/11/2011 19:06
Barium	A	490	0.092		mg/Kg	1	05/11/2011 19:06
Cadmium	A	8.4	0.092		mg/Kg	1	05/11/2011 19:06
Chromium	A	80	0.14		mg/Kg	1	05/11/2011 19:06
Lead	A	2500	0.34		mg/Kg	1	05/11/2011 19:06
Selenium	A	ND	1.4		mg/Kg	1	05/11/2011 19:06
Silver	A	1.3	0.46		mg/Kg	1	05/11/2011 19:06

Method: SW-846 7471A					Analyst: SA		
Prep Method: SW-846 7471					Prep Date/Time: 05/11/2011 09:30		
Total Mercury by CVAA							
Mercury	A	2.3	0.35		mg/Kg	10	05/11/2011 17:23



Analytical Results

Date: Friday, May 13, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-4-2

Sample Description:

Matrix: Solid

Work Order/ID: 11D1129-12

Sampled: 04/28/2011 11:00

Received: 04/28/2011 16:35

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/7470A				Analyst: RPL	
TCLP Mercury by CVAA		Prep Method: /SW-846 7470				Prep Date/Time: 05/13/2011 09:18	
Mercury	A	ND	0.00100		mg/L	1	05/13/2011 12:39
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/13/2011 08:43	
Arsenic	A	ND	0.0100		mg/L	1	05/13/2011 13:09
Barium	A	0.933	0.500		mg/L	1	05/13/2011 13:09
Cadmium	A	0.126	0.00200		mg/L	1	05/13/2011 13:09
Chromium	A	0.0289	0.00300		mg/L	1	05/13/2011 13:09
Lead	A	13.2	0.00750		mg/L	1	05/13/2011 13:09
Selenium	A	ND	0.0300		mg/L	1	05/13/2011 13:09
Silver	A	ND	0.0100		mg/L	1	05/13/2011 13:09



Analytical Results

Date: Friday, May 13, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-4-3

Sample Description:

Matrix: Solid

Work Order/ID: 11D1129-13

Sampled: 04/28/2011 11:00

Received: 04/28/2011 16:35

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
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Method: SW-846 6010B					Analyst: SA		
Total Metals by ICP		Prep Method: SW846 3050B			Prep Date/Time: 05/11/2011 08:55		
Arsenic	A	5.7	0.47		mg/Kg	1	05/11/2011 19:11
Barium	A	1200	0.093		mg/Kg	1	05/11/2011 19:11
Cadmium	A	21	0.093		mg/Kg	1	05/11/2011 19:11
Chromium	A	51	0.14		mg/Kg	1	05/11/2011 19:11
Lead	A	6800	0.35		mg/Kg	1	05/11/2011 19:11
Selenium	A	ND	1.4		mg/Kg	1	05/11/2011 19:11
Silver	A	2.0	0.47		mg/Kg	1	05/11/2011 19:11

Method: SW-846 7471A					Analyst: SA		
Prep Method: SW-846 7471					Prep Date/Time: 05/11/2011 09:30		
Total Mercury by CVAA							
Mercury	A	1.9	0.37		mg/Kg	10	05/11/2011 17:24

Analytical Results

Date: Friday, May 13, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-4-3

Sample Description:

Matrix: Solid

Work Order/ID: 11D1129-14

Sampled: 04/28/2011 11:00

Received: 04/28/2011 16:35

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/7470A		Analyst: RPL			
TCLP Mercury by CVAA		Prep Method: /SW-846 7470		Prep Date/Time: 05/13/2011 09:30			
Mercury	A	ND	0.00100		mg/L	1	05/13/2011 12:58
		Method: 1311/6010B		Analyst: SA			
TCLP Metals by ICP		Prep Method: /SW846 3010A		Prep Date/Time: 05/13/2011 08:43			
Arsenic	A	ND	0.0100		mg/L	1	05/13/2011 13:46
Barium	A	1.62	0.500		mg/L	1	05/13/2011 13:46
Cadmium	A	0.598	0.00200		mg/L	1	05/13/2011 13:46
Chromium	A	0.0491	0.00300	B	mg/L	1	05/13/2011 13:46
Lead	A	91.8	0.00750		mg/L	1	05/13/2011 13:46
Selenium	A	ND	0.0300		mg/L	1	05/13/2011 13:46
Silver	A	ND	0.0100		mg/L	1	05/13/2011 13:46

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed
mg/L	=	Milligrams per Liter (ppm)
mg/Kg	=	Milligrams per Kilogram (ppm)
U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
B	=	Detected in the associated method Blank at a concentration above the routine PQL/RL
D	=	Dilution performed on sample
ND	=	Not Detected at the Reporting Limit (or the Method Detection Limit, if used)
E	=	Value above quantitation range
H	=	Analyte was prepared and/or analyzed outside of the analytical method holding time
I	=	Matrix Interference
R	=	RPD outside accepted recovery limits
S	=	Spike recovery outside recovery limits
Surr	=	Surrogate
DF	=	Dilution Factor
RL	=	Reporting Limit
MDL	=	Method Detection Limit
NR	=	Not Recovered

ANALYTE TYPES: (AT)

A,B	=	Target Analyte
I	=	Internal Standard
M	=	Summation Analyte
S	=	Surrogate
T	=	Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

MBLK	=	Method Blank	ICSA	=	Interference Check Standard "A"
DUP	=	Method Duplicate	ICSAB	=	Interference Check Standard "AB"
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate
BS	=	Method Blank Spike	BSD	=	Method Blank Spike Duplicate
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank
ICV	=	Initial Calibration Verification	CCV	=	Continuing Calibration Verification
PDS	=	Post Digestion Spike	SD	=	Serial Dilution
OPR	=	Ongoing Precision and Recovery Standard			

CERTIFICATIONS

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

The American Association for Laboratory Accreditation [A2LA] for Biological Testing, ISO/IEC 17025 (Certificate# 3045.01)

The American Association for Laboratory Accreditation [A2LA] for Environmental Department of Defense Testing, ISO/IEC 17025 (Certificate# 3045.02)

Illinois EPA for the analysis wastewater and solid waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (accreditation #200064)

Illinois Department of Public Health for the microbiological analysis of drinking water (registry #1755266)

Indiana DEM approved support laboratory for solid waste and wastewater analyses

Indiana SDH for the chemical analysis of drinking water (lab #C-45-03)

Indiana SDH for the microbiological analysis of drinking water (lab #M-45-8)

Kansas Department of Health and Environment for the analysis of drinking water, wastewater, and solid hazardous waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (Certificate No. E-10397)

Kentucky EPPC for the analysis of samples applicable to the Underground Storage Tank program (lab #75)

North Carolina DENR for the environmental analysis for NPDES effluent, surface water, groundwater, and pretreatment regulations(certificate #597)

Wisconsin DNR for the chemical analysis of wastewater and solid waste (lab #998036710)

COOLER INSPECTION

Client Name: Environmental Restoration

Work Order Number: 11D1129

Checklist completed by: 4/28/2011 5:03:00PM Dave Bryant

Date: Friday, May 13, 2011

Date/Time Received: 04/28/2011 16:35

Received by: Dave Bryant

Reviewed by: 5/2/2011 KGF

Carrier Name: Client Delivered

Cooler ID: Default Cooler

Container/Temp Blank Temperature: 4.00°C

After-Hour Arrival?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Shipping container/cooler in good condition?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample containers?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
COC present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient client identification?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient sample collector information?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included a sample description?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC agrees with sample labels?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate matrix?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included date of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included time of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate number of containers?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples in proper container/bottle?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sample containers intact?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
All samples received within holding time?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
If the samples are preserved, are the preservatives identified?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	

If No, adjusted by? _____

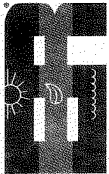
COC included the requested analyses?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC signed when relinquished and received?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples received on ice?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples properly preserved?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Voa vials for aqueous samples have zero headspace?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>

Cooler Comments: _____

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.



Sample ID	Client Sample ID	Comments
11D1129-01	MD-CE	
11D1129-02	MD-CE	
11D1129-03	MD-FILL	
11D1129-04	MD-FILL	
11D1129-05	MD-1-2	
11D1129-06	MD-1-2	
11D1129-07	MD-1-3	
11D1129-08	MD-1-3	
11D1129-09	MD-4-1	
11D1129-10	MD-4-1	
11D1129-11	MD-4-2	
11D1129-12	MD-4-2	
11D1129-13	MD-4-3	
11D1129-14	MD-4-3	



ENVIRONMENTAL RESTORATION, LLC
1666 Fabick Drive
Fenton, MO 63026
(636) 227-7477
Fax (636) 227-6447

Alternate billing information:

Report to: TOBY VIEHWEG

Email to: TOBY VIEHWEG

City/State Collected: Markham IL

Project Description: USEPA

Client: USEPA

Site/Facility ID #: 11D1129

Phone: 312 446 6325

Fax: 636 680 2474

Collected by: Viehweg

Collected by (signature): [Signature]

Packed on ice: N Y

Chain of Custody

Page 1 of 1

Prepared by: Viehweg

Analysis/Container/Preservative

CoCode (lab use only)

Template/Prelogin

Shipped Via:

Remarks/Contaminant Sample # (lab use only)

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Containers
MD-CE				4-28-11	1100	1
MD-Full				4-28-11	1100	1
MD-1-2				4-28-11	1100	1
MD-1-3				4-28-11	1100	1
MD-4-1				4-28-11	1100	1
MD-4-2				4-28-11	1100	1
MD-4-3				4-28-11	1100	1

Analysis/Container/Preservative

CoCode (lab use only)

Template/Prelogin

Shipped Via:

Remarks/Contaminant Sample # (lab use only)

Matrix

SS - Soil/Solid

GW - Groundwater

WW - Waste Water

DW - Drinking Water

OT - Other

pH

Temp

Flow

Other

Samples returned via:

UPS

Fed Ex

Courier

Temp

Date: 4/28/11

Time: 1635

Condition (lab use only)

pH Checked

NOF

11D1129 Kevin Falvey
ER - South Holland
Markham





May 5, 2011

Environmental Restoration
16660 South Canal Street
South Holland, IL 60437-

Work Order No.: 11D0912

Re: Markham Dump

Dear Toby Viehweg:

Microbac Laboratories, Inc. - Chicagoland Division received 2 sample(s) on 4/22/2011 1:40:00PM for the analyses presented in the following report as Work Order 11D0912.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Jeff Loewe, Division Manager at jeff.loewe@microbac.com. You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President at james.nokes@microbac.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Falvey". The signature is stylized with a large initial "K" and a cursive "F".

Kevin Falvey
Account Manager



WORK ORDER SAMPLE SUMMARY

Date: *Thursday, May 5, 2011***Client:** Environmental Restoration**Project:** Markham Dump**Lab Order:** 11D0912

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
11D0912-01	MD-SP-01		04/22/2011 11:00	4/22/2011 1:40:00PM
11D0912-02	MD-SP-01		04/22/2011 11:00	4/22/2011 1:40:00PM



CASE NARRATIVE

Date: Thursday, May 5, 2011

Client: Environmental Restoration

Project: Markham Dump

Lab Order: 11D0912

The Matrix Spike and Matrix Spike Duplicate performed on the MD-SP-01 sample failed the precision criteria for Phenolics. A Post Digestion Spike was performed and did not meet the acceptance criteria. This data is indicative of matrix interference.

B - the Method Blank associated with the MD-SP-01 sample contained Chromium and Lead at a level above the reporting limit. This is considered insignificant, as the concentration in the sample was more than ten-times that measured in the blank.

Analytical Results

Date: Thursday, May 5, 2011

Client: Environmental Restoration
 Client Project: Markham Dump
 Client Sample ID: MD-SP-01
 Sample Description:
 Matrix: Solid

Work Order/ID: 11D0912-01
 Sampled: 04/22/2011 11:00
 Received: 04/22/2011 13:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 8082			Analyst: clr				
Polychlorinated Biphenyls	Prep Method: SW846 3550B			Prep Date/Time: 04/25/2011 12:26			
Aroclor 1016	A	ND	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1221	A	ND	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1232	A	ND	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1242	A	ND	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1248	A	700	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1254	A	ND	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1260	A	390	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1262	A	ND	170		µg/Kg	5	04/26/2011 22:54
Aroclor 1268	A	ND	170		µg/Kg	5	04/26/2011 22:54
Total PCB's	A	1100	170		µg/Kg	5	04/26/2011 22:54
Surr: Decachlorobiphenyl	S	125.00	38-128		%REC	5	04/26/2011 22:54
Surr: Tetrachloro-m-xylene	S	100.00	40-130		%REC	5	04/26/2011 22:54

Method: 1311/8270C				Analyst: BR			
TCLP Semivolatile Organic Compounds		Prep Method: /SW846 3510		Prep Date/Time: 04/29/2011 08:56			
1,4-Dichlorobenzene	A	ND	0.050		mg/L	1	05/03/2011 13:46
2,4,5-Trichlorophenol	A	ND	0.050		mg/L	1	05/03/2011 13:46
2,4,6-Trichlorophenol	A	ND	0.050		mg/L	1	05/03/2011 13:46
2,4-Dinitrotoluene	A	ND	0.050		mg/L	1	05/03/2011 13:46
2-Methylphenol	A	ND	0.050		mg/L	1	05/03/2011 13:46
3/4-Methylphenol	A	ND	0.050		mg/L	1	05/03/2011 13:46
Hexachlorobenzene	A	ND	0.050		mg/L	1	05/03/2011 13:46
Hexachlorobutadiene	A	ND	0.050		mg/L	1	05/03/2011 13:46
Hexachloroethane	A	ND	0.050		mg/L	1	05/03/2011 13:46
Nitrobenzene	A	ND	0.050		mg/L	1	05/03/2011 13:46
Pentachlorophenol	A	ND	0.25		mg/L	1	05/03/2011 13:46
Pyridine	A	ND	0.050		mg/L	1	05/03/2011 13:46
Total Cresol	M	ND	0.050		mg/L	1	05/03/2011 13:46
Surr: 2,4,6-Tribromophenol	S	128.00	47.8-138		%REC	1	05/03/2011 13:46
Surr: 2-Fluorobiphenyl	S	67.00	10-110		%REC	1	05/03/2011 13:46
Surr: 2-Fluorophenol	S	80.20	10-110		%REC	1	05/03/2011 13:46
Surr: Nitrobenzene-d5	S	86.80	10-110		%REC	1	05/03/2011 13:46
Surr: Phenol-d5	S	86.80	10-60.8	S	%REC	1	05/03/2011 13:46
Surr: Terphenyl-d14	S	110.00	16.8-110		%REC	1	05/03/2011 13:46

Method: 1311/8260B					Analyst: jln		
TCLP VOA Zero Head Extraction		Prep Method: SW-846 1311/<noprep>			Prep Date/Time: 04/26/2011 08:25		
1,1-Dichloroethene	A	ND	0.050		mg/L	10	04/26/2011 12:44
1,2-Dichloroethane	A	ND	0.050		mg/L	10	04/26/2011 12:44
2-Butanone	A	ND	0.10		mg/L	10	04/26/2011 12:44
Benzene	A	ND	0.050		mg/L	10	04/26/2011 12:44
Carbon tetrachloride	A	ND	0.050		mg/L	10	04/26/2011 12:44
Chlorobenzene	A	ND	0.050		mg/L	10	04/26/2011 12:44



Analytical Results

Date: Thursday, May 5, 2011

Client: Environmental Restoration
 Client Project: Markham Dump
 Client Sample ID: MD-SP-01
 Sample Description:
 Matrix: Solid

Work Order/ID: 11D0912-01
 Sampled: 04/22/2011 11:00
 Received: 04/22/2011 13:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
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Method: 1311/8260B						Analyst: jln	
TCLP VOA Zero Head Extraction		Prep Method: SW-846 1311/<noprep>				Prep Date/Time: 04/26/2011 08:25	
Chloroform	A	ND	0.050		mg/L	10	04/26/2011 12:44
Tetrachloroethene	A	ND	0.050		mg/L	10	04/26/2011 12:44
Trichloroethene	A	ND	0.050		mg/L	10	04/26/2011 12:44
Vinyl chloride	A	ND	0.020		mg/L	10	04/26/2011 12:44
1,4-Dichlorobenzene	B	ND	0.10		mg/L	10	04/26/2011 12:44
Surr: 1,2-Dichloroethane-d4	S	84.30	74.5-132		%REC	10	04/26/2011 12:44
Surr: 4-Bromofluorobenzene	S	102.00	80-120		%REC	10	04/26/2011 12:44
Surr: Dibromofluoromethane	S	101.00	80-120		%REC	10	04/26/2011 12:44
Surr: Toluene-d8	S	93.50	80-120		%REC	10	04/26/2011 12:44

TCLP Mercury by CVAA		Method: 1311/7470A				Analyst: SA	
		Prep Method: /SW-846 7470				Prep Date/Time: 04/25/2011 09:25	
Mercury	A	ND	0.00100		mg/L	1	04/25/2011 14:18

TCLP Metals by ICP		Method: 1311/6010B				Analyst: SA	
		Prep Method: /SW846 3010A				Prep Date/Time: 04/25/2011 09:07	
Arsenic	A	ND	0.0100		mg/L	1	04/25/2011 14:59
Barium	A	0.960	0.500		mg/L	1	04/25/2011 14:59
Cadmium	A	0.181	0.00200		mg/L	1	04/25/2011 14:59
Chromium	A	0.00590	0.00300		mg/L	1	04/25/2011 14:59
Lead	A	1.89	0.00750		mg/L	1	04/25/2011 14:59
Selenium	A	ND	0.0300		mg/L	1	04/25/2011 14:59
Silver	A	ND	0.0100		mg/L	1	04/25/2011 14:59

Method: ASTM D92-90 Modified					Analyst: TMG		
Ignitability (Open Cup)					Prep Date/Time: 04/28/2011 17:26		
Ignitability	A	> 170	30	°F	1	04/28/2011 17:26	

Method: SW-846 9095B					Analyst: ABG		
Paint Filter					Prep Date/Time: 04/25/2011 12:35		
Paint Filter	A	Pass	0.0		Pass/Fail	1	04/25/2011 12:49

Method: SW-846 9045C

Analyst: ABG

pH

Prep Date/Time: 04/25/2011 14:55

pH	A	7.58	2.00		pH Units	1	04/25/2011 15:03
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Method: SW-846 9066					Analyst: EINIK		
Total Phenolics		Prep Method: Solid Phenolics Distillation				Prep Date/Time: 04/27/2011 11:25	
Phenolics, Total Recoverable	A	5.7	0.50		mg/Kg	1	04/27/2011 14:21

Method: Chapter 7/9014					Analyst: EINIK		
Reactive Cyanide		Prep Method: Solid Reactive CN Distillation				Prep Date/Time: 04/27/2011 12:15	
Reactive Cyanide	A	ND	10		mg/Kg	1	04/27/2011 16:36

Reactive Sulfide	Method: Chapter 7/9034		Analyst: ABG
	Prep Method: Solid Reactive Sulfide Distillation		Prep Date/Time: 04/27/2011 12:15



Analytical Results

Date: Thursday, May 5, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-SP-01

Sample Description:

Matrix: Solid

Work Order/ID: 11D0912-01

Sampled: 04/22/2011 11:00

Received: 04/22/2011 13:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: Chapter 7/9034							Analyst: ABG
Prep Method: Solid Reactive Sulfide Distillation							Prep Date/Time: 04/27/2011 12:15
Reactive Sulfide	A	ND	10		mg/Kg	1	04/27/2011 15:34



Analytical Results

Date: Thursday, May 5, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-SP-01

Sample Description:

Matrix: Solid

Work Order/ID: 11D0912-02

Sampled: 04/22/2011 11:00

Received: 04/22/2011 13:40

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	130	1.3	B	mg/Kg	10	04/28/2011 0:02
Lead	A	1800	3.3	B	mg/Kg	10	04/28/2011 0:02

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed
mg/L	=	Milligrams per Liter (ppm)
mg/Kg	=	Milligrams per Kilogram (ppm)
U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
B	=	Detected in the associated method Blank at a concentration above the routine PQL/RL
D	=	Dilution performed on sample
ND	=	Not Detected at the Reporting Limit (or the Method Detection Limit, if used)
E	=	Value above quantitation range
H	=	Analyte was prepared and/or analyzed outside of the analytical method holding time
I	=	Matrix Interference
R	=	RPD outside accepted recovery limits
S	=	Spike recovery outside recovery limits
Surr	=	Surrogate
DF	=	Dilution Factor
RL	=	Reporting Limit
MDL	=	Method Detection Limit
NR	=	Not Recovered

ANALYTE TYPES: (AT)

A,B	=	Target Analyte
I	=	Internal Standard
M	=	Summation Analyte
S	=	Surrogate
T	=	Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

MBLK	=	Method Blank	ICSA	=	Interference Check Standard "A"
DUP	=	Method Duplicate	ICSAB	=	Interference Check Standard "AB"
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate
BS	=	Method Blank Spike	BSD	=	Method Blank Spike Duplicate
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank
ICV	=	Initial Calibration Verification	CCV	=	Continuing Calibration Verification
PDS	=	Post Digestion Spike	SD	=	Serial Dilution
OPR	=	Ongoing Precision and Recovery Standard			

CERTIFICATIONS

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

The American Association for Laboratory Accreditation [A2LA] for Biological Testing, ISO/IEC 17025 (Certificate# 3045.01)

The American Association for Laboratory Accreditation [A2LA] for Environmental Department of Defense Testing, ISO/IEC 17025 (Certificate# 3045.02)

Illinois EPA for the analysis wastewater and solid waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (accreditation #200064)

Illinois Department of Public Health for the microbiological analysis of drinking water (registry #1755266)

Indiana DEM approved support laboratory for solid waste and wastewater analyses

Indiana SDH for the chemical analysis of drinking water (lab #C-45-03)

Indiana SDH for the microbiological analysis of drinking water (lab #M-45-8)

Kansas Department of Health and Environment for the analysis of drinking water, wastewater, and solid hazardous waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (Certificate No. E-10397)

Kentucky EPPC for the analysis of samples applicable to the Underground Storage Tank program (lab #75)

North Carolina DENR for the environmental analysis for NPDES effluent, surface water, groundwater, and pretreatment regulations(certificate #597)

Wisconsin DNR for the chemical analysis of wastewater and solid waste (lab #998036710)

COOLER INSPECTION

Client Name: Environmental Restoration

Work Order Number: 11D0912

Checklist completed by: 4/22/2011 1:57:00PM Dave Bryant

Date: Thursday, May 5, 2011

Date/Time Received: 04/22/2011 13:40

Received by: Dave Bryant

Reviewed by: 4/22/2011 KGF

Carrier Name: Microbac

Cooler ID: Default Cooler

Container/Temp Blank Temperature: 5.00°C

After-Hour Arrival?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Shipping container/cooler in good condition?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample containers?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
COC present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient client identification?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient sample collector information?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included a sample description?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC agrees with sample labels?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate matrix?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included date of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included time of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate number of containers?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples in proper container/bottle?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sample containers intact?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
All samples received within holding time?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
If the samples are preserved, are the preservatives identified?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	

If No, adjusted by? _____

COC included the requested analyses?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC signed when relinquished and received?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples received on ice?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples properly preserved?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Voa vials for aqueous samples have zero headspace?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>

Cooler Comments: _____

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.

Sample ID	Client Sample ID	Comments
11D0912-01	MD-SP-01	
11D0912-02	MD-SP-01	



Revised
5/27/2011

May 27, 2011

Environmental Restoration
16660 South Canal Street
South Holland, IL 60437-

Work Order No.: 11E0777

Re: Markham

Dear Toby Viehweg:

Microbac Laboratories, Inc. - Chicagoland Division received 20 sample(s) on 5/20/2011 10:00:00AM for the analyses presented in the following report as Work Order 11E0777.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Jeff Loewe, Division Manager at jeff.loewe@microbac.com. You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President at james.nokes@microbac.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Falvey", is written over a light blue horizontal line.

Kevin Falvey
Account Manager



Revised
5/27/2011

WORK ORDER SAMPLE SUMMARY

Date: Friday, May 27, 2011

Client: Environmental Restoration
Project: Markham
Lab Order: 11E0777

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
11E0777-01	MD2-LK-10		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-02	MD2-LK-15		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-03	MD2-LK-20		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-04	MD2-LK-25		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-05	MD2-ID-10		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-06	MD2-ID-15		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-07	MD2-ID-20		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-08	MD2-ID-25		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-09	MD3-PL-10		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-10	MD3-PL-15		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-11	MD3-PL-20		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-12	MD3-PL-25		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-13	MD4-ID-10		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-14	MD4-ID-15		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-15	MD4-ID-20		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-16	MD4-ID-25		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-17	MD4-LK-10		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-18	MD4-LK-15		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-19	MD4-LK-20		05/18/2011 10:00	5/20/2011 10:00:00AM
11E0777-20	MD4-LK-25		05/18/2011 10:00	5/20/2011 10:00:00AM



Revised
5/27/2011

CASE NARRATIVE

Date: Friday, May 27, 2011

Client: Environmental Restoration
Project: Markham
Lab Order: 11E0777

This report has been revised to include TCLP Chromium on samples # 9, 10, 11 and 12.



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: MD2-LK-10

Sample Description:

Matrix: Solid

Work Order/ID: 11E0777-01

Sampled: 05/18/2011 10:00

Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	22.8	0.00750		mg/L	1	05/25/2011 16:43



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: MD2-LK-15

Sample Description:

Matrix: Solid

Work Order/ID: 11E0777-02

Sampled: 05/18/2011 10:00

Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	15.1	0.00750		mg/L	1	05/25/2011 17:10



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: MD2-LK-20

Sample Description:

Matrix: Solid

Work Order/ID: 11E0777-03

Sampled: 05/18/2011 10:00

Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	0.969	0.00750		mg/L	1	05/25/2011 17:15



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration
Client Project: Markham
Client Sample ID: MD2-LK-25
Sample Description:
Matrix: Solid

Work Order/ID: 11E0777-04
Sampled: 05/18/2011 10:00
Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	13.1	0.00750		mg/L	1	05/25/2011 17:21



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: MD2-ID-10

Sample Description:

Matrix: Solid

Work Order/ID: 11E0777-05

Sampled: 05/18/2011 10:00

Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	6.94	0.00750		mg/L	1	05/25/2011 17:27



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: MD2-ID-15

Sample Description:

Matrix: Solid

Work Order/ID: 11E0777-06

Sampled: 05/18/2011 10:00

Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	0.00800	0.00750		mg/L	1	05/25/2011 17:32



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration
Client Project: Markham
Client Sample ID: MD2-ID-20
Sample Description:
Matrix: Solid

Work Order/ID: 11E0777-07
Sampled: 05/18/2011 10:00
Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	ND	0.00750		mg/L	1	05/25/2011 17:38



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration
Client Project: Markham
Client Sample ID: MD2-ID-25
Sample Description:
Matrix: Solid

Work Order/ID: 11E0777-08
Sampled: 05/18/2011 10:00
Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	ND	0.00750		mg/L	1	05/25/2011 17:43



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: MD3-PL-10

Sample Description:

Matrix: Solid

Work Order/ID: 11E0777-09

Sampled: 05/18/2011 10:00

Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Chromium	A	1.13	0.00300		mg/L	1	05/25/2011 17:49
Lead	A	73.2	0.00750		mg/L	1	05/25/2011 17:49



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration
Client Project: Markham
Client Sample ID: MD3-PL-15
Sample Description:
Matrix: Solid

Work Order/ID: 11E0777-10
Sampled: 05/18/2011 10:00
Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Chromium	A	0.764	0.00300		mg/L	1	05/25/2011 17:54
Lead	A	0.938	0.00750		mg/L	1	05/25/2011 17:54



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: MD3-PL-20

Sample Description:

Matrix: Solid

Work Order/ID: 11E0777-11

Sampled: 05/18/2011 10:00

Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 05/24/2011 10:07				
TCLP Metals by ICP							
Chromium	A	77.5	0.00300		mg/L	1	05/25/2011 18:00
Lead	A	ND	0.00750		mg/L	1	05/25/2011 18:00



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: MD3-PL-25

Sample Description:

Matrix: Solid

Work Order/ID: 11E0777-12

Sampled: 05/18/2011 10:00

Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Chromium	A	108	0.00300	E	mg/L	1	05/25/2011 18:27
Lead	A	1.29	0.00750		mg/L	1	05/25/2011 18:27



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: MD4-ID-10

Sample Description:

Matrix: Solid

Work Order/ID: 11E0777-13

Sampled: 05/18/2011 10:00

Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	11.8	0.00750		mg/L	1	05/25/2011 18:33



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: MD4-ID-15

Sample Description:

Matrix: Solid

Work Order/ID: 11E0777-14

Sampled: 05/18/2011 10:00

Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	0.403	0.00750		mg/L	1	05/25/2011 18:38



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: MD4-ID-20

Sample Description:

Matrix: Solid

Work Order/ID: 11E0777-15

Sampled: 05/18/2011 10:00

Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	ND	0.00750		mg/L	1	05/25/2011 18:44



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client:	Environmental Restoration		
Client Project:	Markham		
Client Sample ID:	MD4-ID-25	Work Order/ID:	11E0777-16
Sample Description:		Sampled:	05/18/2011 10:00
Matrix:	Solid	Received:	05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	ND	0.00750		mg/L	1	05/25/2011 18:49



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: MD4-LK-10

Sample Description:

Matrix: Solid

Work Order/ID: 11E0777-17

Sampled: 05/18/2011 10:00

Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	14.1	0.00750		mg/L	1	05/25/2011 18:55



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration
Client Project: Markham
Client Sample ID: MD4-LK-15
Sample Description:
Matrix: Solid

Work Order/ID: 11E0777-18
Sampled: 05/18/2011 10:00
Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	4.49	0.00750		mg/L	1	05/25/2011 19:00



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: MD4-LK-20

Sample Description:

Matrix: Solid

Work Order/ID: 11E0777-19

Sampled: 05/18/2011 10:00

Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	ND	0.00750		mg/L	1	05/25/2011 19:06



Revised
5/27/2011

Analytical Results

Date: Friday, May 27, 2011

Client: Environmental Restoration

Client Project: Markham

Client Sample ID: MD4-LK-25

Sample Description:

Matrix: Solid

Work Order/ID: 11E0777-20

Sampled: 05/18/2011 10:00

Received: 05/20/2011 10:00

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 05/24/2011 10:07	
Lead	A	0.171	0.00750		mg/L	1	05/25/2011 19:11



Revised
5/27/2011

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed
mg/L	=	Milligrams per Liter (ppm)
mg/Kg	=	Milligrams per Kilogram (ppm)
U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
B	=	Detected in the associated method Blank at a concentration above the routine PQL/RL
D	=	Dilution performed on sample
ND	=	Not Detected at the Reporting Limit (or the Method Detection Limit, if used)
E	=	Value above quantitation range
H	=	Analyte was prepared and/or analyzed outside of the analytical method holding time
I	=	Matrix Interference
R	=	RPD outside accepted recovery limits
S	=	Spike recovery outside recovery limits
Surr	=	Surrogate
DF	=	Dilution Factor
RL	=	Reporting Limit
MDL	=	Method Detection Limit
NR	=	Not Recovered

ANALYTE TYPES: (AT)

A,B	=	Target Analyte
I	=	Internal Standard
M	=	Summation Analyte
S	=	Surrogate
T	=	Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

MBLK	=	Method Blank	ICSA	=	Interference Check Standard "A"
DUP	=	Method Duplicate	ICSAB	=	Interference Check Standard "AB"
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate
BS	=	Method Blank Spike	BSD	=	Method Blank Spike Duplicate
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank
ICV	=	Initial Calibration Verification	CCV	=	Continuing Calibration Verification
PDS	=	Post Digestion Spike	SD	=	Serial Dilution
OPR	=	Ongoing Precision and Recovery Standard			

CERTIFICATIONS

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

The American Association for Laboratory Accreditation [A2LA] for Biological Testing, ISO/IEC 17025 (Certificate# 3045.01)

The American Association for Laboratory Accreditation [A2LA] for Environmental Department of Defense Testing, ISO/IEC 17025 (Certificate# 3045.02)

Illinois EPA for the analysis wastewater and solid waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (accreditation #200064)

Illinois Department of Public Health for the microbiological analysis of drinking water (registry #1755266)

Indiana DEM approved support laboratory for solid waste and wastewater analyses

Indiana SDH for the chemical analysis of drinking water (lab #C-45-03)

Indiana SDH for the microbiological analysis of drinking water (lab #M-45-8)

Kansas Department of Health and Environment for the analysis of drinking water, wastewater, and solid hazardous waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (Certificate No. E-10397)

Kentucky EPPC for the analysis of samples applicable to the Underground Storage Tank program (lab #75)

North Carolina DENR for the environmental analysis for NPDES effluent, surface water, groundwater, and pretreatment regulations(certificate #597)

Wisconsin DNR for the chemical analysis of wastewater and solid waste (lab #998036710)



Revised
5/27/2011

COOLER INSPECTION

Client Name: Environmental Restoration

Date: Friday, May 27, 2011

Date/Time Received: 05/20/2011 10:00

Work Order Number: 11E0777

Received by: Dave Bryant

Checklist completed by: 5/20/2011 10:56:00AM | Dave Bryant

Reviewed by: 5/20/2011 | KGF

Carrier Name: Microbac

Cooler ID: Default Cooler

Container/Temp Blank Temperature: 5.00°C

After-Hour Arrival?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Shipping container/cooler in good condition?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample containers?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
COC present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient client identification?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient sample collector information?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included a sample description?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC agrees with sample labels?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate matrix?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included date of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included time of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate number of containers?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples in proper container/bottle?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sample containers intact?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
All samples received within holding time?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
If the samples are preserved, are the preservatives identified?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	

If No, adjusted by? _____

COC included the requested analyses?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC signed when relinquished and received?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples received on ice?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples properly preserved?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Voa vials for aqueous samples have zero headspace?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>

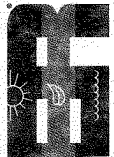
Cooler Comments: _____

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.



Revised
5/27/2011

Sample ID	Client Sample ID	Comments
11E0777-01	MD2-LK-10	
11E0777-02	MD2-LK-15	
11E0777-03	MD2-LK-20	
11E0777-04	MD2-LK-25	
11E0777-05	MD2-ID-10	
11E0777-06	MD2-ID-15	
11E0777-07	MD2-ID-20	
11E0777-08	MD2-ID-25	
11E0777-09	MD3-PL-10	
11E0777-10	MD3-PL-15	
11E0777-11	MD3-PL-20	
11E0777-12	MD3-PL-25	
11E0777-13	MD4-ID-10	
11E0777-14	MD4-ID-15	
11E0777-15	MD4-ID-20	
11E0777-16	MD4-ID-25	
11E0777-17	MD4-LK-10	
11E0777-18	MD4-LK-15	
11E0777-19	MD4-LK-20	
11E0777-20	MD4-LK-25	



ENVIRONMENTAL RESTORATION LLC

1666 Fabick Drive
Fenton, MO 63026
(636) 227-7477
Fax (636) 227-6447

11E0777 Kevin Falvey
ER - South Holland
Markham

Alternate billing information:

Report to: Vishwa
Email to: T. Vishwa
City/State Collected: Markham IL

Project Name: Markham Dump
P.O. #:

Client: USEPA
Site/Facility ID #:

Date Results Needed:
Email? ☐ No ☐ Yes
Fax? ☐ No ☐ Yes
Time

Lab MUST Be Notified
Same Day ☐ Next Day ☐ Two Day ☐

No. of Containers

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Containers
MD2-LK-10				5-18-11	1000	1
MD2-LK-15						1
MD2-LK-20						1
MD2-LK-25						1
MD2-LK-ID-10						1
MD2-ID-15						1
MD2-ID-20						1
MD2-ID-25						1
MD3-PL-10						1
MD3-PL-15						1
MD3-PL-20						1
MD3-PL-25						1

*Matrix SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: ON FILE

Relinquished by: (Signature)	Date: 5-26-11	Time: 8:30	Relinquished by: (Signature)	Date: 5-26-11	Time: 10:00
Relinquished by: (Signature)	Date: 5-20-11	Time: 10:00	Relinquished by: (Signature)	Date: 5-20-11	Time: 10:00
Relinquished by: (Signature)	Date: 5-20-11	Time: 10:00	Relinquished by: (Signature)	Date: 5-20-11	Time: 10:00

Temp: 52.05
Date: 5/20/11

Bottles Received: 1000

Time: 1000

Condition (lab use only)

pH Checked NCF:

Flow

Temp

Other

Analysis/Container/Preservative

Chain of Custody

Page 1 of 2

Prepared by: Vishwa

CoCode (lab use only)

Template/Prelogin

Shipped Via:

Remarks/Containment Sample # (lab only)

11E0777

05/20/2011

01

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April 15, 2011

Environmental Restoration
16660 South Canal Street
South Holland, IL 60437-

Work Order No.: 11D0305

Re: Markham, IL

Dear Toby Viehweg:

Microbac Laboratories, Inc. - Chicagoland Division received 26 sample(s) on 4/7/2011 2:45:00PM for the analyses presented in the following report as Work Order 11D0305.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Jeff Loewe, Division Manager at jeff.loewe@microbac.com. You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President at james.nokes@microbac.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Falvey", is written over a light blue horizontal line.

Kevin Falvey
Account Manager

**WORK ORDER SAMPLE SUMMARY****Date:** *Friday, April 15, 2011***Client:** Environmental Restoration**Project:** Markham, IL**Lab Order:** 11D0305

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
11D0305-01	MD		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-02	MD		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-03	9-1-5		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-04	9-1-5		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-05	9-1-10		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-06	9-1-10		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-07	9-1-15		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-08	9-1-15		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-09	9-1-20		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-10	9-1-20		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-11	EC-5		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-12	EC-5		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-13	EC-10		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-14	EC-10		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-15	EC-15		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-16	EC-15		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-17	EC-20		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-18	EC-20		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-19	FF2-5		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-20	FF2-5		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-21	FF2-10		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-22	FF2-10		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-23	FF2-15		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-24	FF2-15		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-25	FF2-20		04/07/2011 09:00	4/7/2011 2:45:00PM
11D0305-26	FF2-20		04/07/2011 09:00	4/7/2011 2:45:00PM



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MD

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-01

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/08/2011 08:46	
Lead	A	1700	0.37		mg/Kg	1	04/08/2011 22:52



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MD

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-02

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/12/2011 12:20	
Lead	A	2.98	0.00750		mg/L	1	04/13/2011 12:23



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: 9-1-5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-03

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/08/2011 08:46	
Lead	A	2000	0.37		mg/Kg	1	04/08/2011 23:31



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: 9-1-5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-04

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/12/2011 12:20	
Lead	A	0.675	0.00750		mg/L	1	04/13/2011 16:36



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: 9-1-10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-05

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/08/2011 08:46	
Lead	A	1800	0.37		mg/Kg	1	04/08/2011 23:37



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: 9-1-10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-06

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/12/2011 12:20	
Lead	A	ND	0.00750		mg/L	1	04/13/2011 16:42



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: 9-1-15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-07

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/08/2011 08:46	
Lead	A	1900	0.35		mg/Kg	1	04/08/2011 23:43



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: 9-1-15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-08

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/12/2011 12:20	
Lead	A	ND	0.00750		mg/L	1	04/13/2011 16:47



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: 9-1-20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-09

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/08/2011 08:46	
Lead	A	1400	0.37		mg/Kg	1	04/08/2011 23:49



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: 9-1-20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-10

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/12/2011 12:20				
TCLP Metals by ICP							
Lead	A	ND	0.00750		mg/L	1	04/13/2011 16:53



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: EC-5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-11

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/08/2011 08:46	
Lead	A	1700	0.37		mg/Kg	1	04/08/2011 23:55



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: EC-5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-12

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/12/2011 12:20	
Lead	A	6.34	0.00750		mg/L	1	04/13/2011 16:58



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: EC-10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-13

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/08/2011 08:46	
Lead	A	1700	0.38		mg/Kg	1	04/09/2011 0:01



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: EC-10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-14

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/12/2011 12:20	
Lead	A	ND	0.00750		mg/L	1	04/13/2011 17:20



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: EC-15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-15

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 6010B			Analyst: SA				
Prep Method: SW846 3050B			Prep Date/Time: 04/08/2011 08:46				
Total Metals by ICP	A	1500	0.36		mg/Kg	1	04/09/2011 0:07



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: EC-15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-16

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/12/2011 12:20	
Lead	A	ND	0.00750		mg/L	1	04/13/2011 17:26



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: EC-20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-17

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 6010B			Analyst: SA				
Prep Method: SW846 3050B			Prep Date/Time: 04/08/2011 08:46				
Total Metals by ICP	A	2300	0.36		mg/Kg	1	04/09/2011 0:12



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: EC-20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-18

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/12/2011 12:20	
Lead	A	ND	0.00750		mg/L	1	04/13/2011 17:31



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: FF2-5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-19

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 6010B			Analyst: SA				
Prep Method: SW846 3050B			Prep Date/Time: 04/08/2011 08:46				
Total Metals by ICP	A	2300	0.37		mg/Kg	1	04/09/2011 0:18



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: FF2-5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-20

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/12/2011 12:20	
Lead	A	15.4	0.00750		mg/L	1	04/13/2011 17:37



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: FF2-10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-21

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/08/2011 08:46	
Lead	A	1500	0.34		mg/Kg	1	04/09/2011 0:46



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: FF2-10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-22

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/12/2011 12:20	
Lead	A	10.3	0.00750		mg/L	1	04/13/2011 17:43



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: FF2-15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-23

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/08/2011 08:46	
Lead	A	1400	0.35		mg/Kg	1	04/09/2011 0:52



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: FF2-15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-24

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/12/2011 12:20	
Lead	A	ND	0.00750		mg/L	1	04/13/2011 17:48



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: FF2-20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-25

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/08/2011 08:46	
Lead	A	5200	0.38		mg/Kg	1	04/09/2011 0:58



Analytical Results

Date: Friday, April 15, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: FF2-20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0305-26

Sampled: 04/07/2011 9:00

Received: 04/07/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/12/2011 12:20				
TCLP Metals by ICP							
Lead	A	ND	0.00750		mg/L	1	04/13/2011 17:54

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed
mg/L	=	Milligrams per Liter (ppm)
mg/Kg	=	Milligrams per Kilogram (ppm)
U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
B	=	Detected in the associated method Blank at a concentration above the routine PQL/RL
D	=	Dilution performed on sample
ND	=	Not Detected at the Reporting Limit (or the Method Detection Limit, if used)
E	=	Value above quantitation range
H	=	Analyte was prepared and/or analyzed outside of the analytical method holding time
I	=	Matrix Interference
R	=	RPD outside accepted recovery limits
S	=	Spike recovery outside recovery limits
Surr	=	Surrogate
DF	=	Dilution Factor
RL	=	Reporting Limit
MDL	=	Method Detection Limit
NR	=	Not Recovered

ANALYTE TYPES: (AT)

A,B	=	Target Analyte
I	=	Internal Standard
M	=	Summation Analyte
S	=	Surrogate
T	=	Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

MBLK	=	Method Blank	ICSA	=	Interference Check Standard "A"
DUP	=	Method Duplicate	ICSAB	=	Interference Check Standard "AB"
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate
BS	=	Method Blank Spike	BSD	=	Method Blank Spike Duplicate
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank
ICV	=	Initial Calibration Verification	CCV	=	Continuing Calibration Verification
PDS	=	Post Digestion Spike	SD	=	Serial Dilution
OPR	=	Ongoing Precision and Recovery Standard			

CERTIFICATIONS

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

The American Association for Laboratory Accreditation [A2LA] for Biological Testing, ISO/IEC 17025 (Certificate# 3045.01)

The American Association for Laboratory Accreditation [A2LA] for Environmental Department of Defense Testing, ISO/IEC 17025 (Certificate# 3045.02)

Illinois EPA for the analysis wastewater and solid waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (accreditation #200064)

Illinois Department of Public Health for the microbiological analysis of drinking water (registry #1755266)

Indiana DEM approved support laboratory for solid waste and wastewater analyses

Indiana SDH for the chemical analysis of drinking water (lab #C-45-03)

Indiana SDH for the microbiological analysis of drinking water (lab #M-45-8)

Kansas Department of Health and Environment for the analysis of drinking water, wastewater, and solid hazardous waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (Certificate No. E-10397)

Kentucky EPPC for the analysis of samples applicable to the Underground Storage Tank program (lab #75)

North Carolina DENR for the environmental analysis for NPDES effluent, surface water, groundwater, and pretreatment regulations(certificate #597)

Wisconsin DNR for the chemical analysis of wastewater and solid waste (lab #998036710)

COOLER INSPECTION

Client Name: Environmental Restoration

Work Order Number: 11D0305

Checklist completed by: 4/7/2011 4:02:00PM Dave Bryant

Date: Friday, April 15, 2011

Date/Time Received: 04/07/2011 14:45

Received by: Dave Bryant

Reviewed by: 4/7/2011 KGF

Carrier Name: Microbac

Cooler ID: Default Cooler

Container/Temp Blank Temperature: 5.00°C

After-Hour Arrival?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Shipping container/cooler in good condition?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample containers?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
COC present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient client identification?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient sample collector information?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included a sample description?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC agrees with sample labels?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate matrix?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included date of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included time of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate number of containers?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples in proper container/bottle?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sample containers intact?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
All samples received within holding time?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
If the samples are preserved, are the preservatives identified?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	

If No, adjusted by? _____

COC included the requested analyses?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC signed when relinquished and received?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples received on ice?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples properly preserved?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Voa vials for aqueous samples have zero headspace?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>

Cooler Comments: _____

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.



Sample ID	Client Sample ID	Comments
11D0305-01	MD	
11D0305-02	MD	
11D0305-03	9-1-5	
11D0305-04	9-1-5	
11D0305-05	9-1-10	
11D0305-06	9-1-10	
11D0305-07	9-1-15	
11D0305-08	9-1-15	
11D0305-09	9-1-20	
11D0305-10	9-1-20	
11D0305-11	EC-5	
11D0305-12	EC-5	
11D0305-13	EC-10	
11D0305-14	EC-10	
11D0305-15	EC-15	
11D0305-16	EC-15	
11D0305-17	EC-20	
11D0305-18	EC-20	
11D0305-19	FF2-5	
11D0305-20	FF2-5	
11D0305-21	FF2-10	
11D0305-22	FF2-10	
11D0305-23	FF2-15	
11D0305-24	FF2-15	
11D0305-25	FF2-20	
11D0305-26	FF2-20	



Analytical QC Summary

Client: Environmental Restoration

Metals - Quality Control

Work Order: 11D0305

Project: Markham, IL

Batch: B013297 Prep: SW846 3050B

Total Metals by ICP

Sample ID:	Blank (B013297-BLK1)			Method:	SW-846 6010B			Prepped:	04/08/2011	08:46
Source:								Analyzed:	04/08/2011	21:34
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Lead	ND	0.38	mg/Kg							

Sample ID:	LCS (B013297-BS1)			Method:	SW-846 6010B			Prepped:	04/08/2011	08:46
Source:								Analyzed:	04/08/2011	21:40
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Lead	142	0.75	mg/Kg	154.0		92.4	62.9-110		20	

Sample ID:	Matrix Spike (B013297-MS1)			Method:	SW-846 6010B			Prepped:	04/08/2011	08:46
Source:	11D0305-01							Analyzed:	04/08/2011	22:58
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Lead	2030	0.36	mg/Kg	97.09	1720	317	75-125		20	S

Sample ID:	Matrix Spike Dup (B013297-MSD1)			Method:	SW-846 6010B			Prepped:	04/08/2011	08:46
Source:	11D0305-01							Analyzed:	04/08/2011	23:26
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Lead	1980	0.37	mg/Kg	98.04	1720	258	75-125	2.73	20	S



Analytical QC Summary

Client: Environmental Restoration

TCLP Metals - Quality Control

Work Order: 11D0305

Project: Markham, IL

Batch: B013431 **Prep:** /SW846 3010A

TCLP Metals by ICP

Sample ID: Blank (B013431-BLK1) **Method:** 1311/6010B **Prepped:** 04/12/2011 12:20

Source: **Analyzed:** 04/13/2011 11:54

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Lead	ND	0.00750	mg/L							

Sample ID: LCS (B013431-BS1) **Method:** 1311/6010B **Prepped:** 04/12/2011 12:20

Source: **Analyzed:** 04/13/2011 12:00

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Lead	1.96	0.00750	mg/L	2.000		98.0	80-120		0	

Sample ID: Matrix Spike (B013431-MS1) **Method:** 1311/6010B **Prepped:** 04/12/2011 12:20

Source: 11D0308-01 **Analyzed:** 04/13/2011 12:34

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Lead	1.97	0.00750	mg/L	2.000	ND	98.7	50-200		20	

Sample ID: Matrix Spike Dup (B013431-MSD1) **Method:** 1311/6010B **Prepped:** 04/12/2011 12:20

Source: 11D0308-01 **Analyzed:** 04/13/2011 12:40

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Lead	1.94	0.00750	mg/L	2.000	ND	97.2	50-200	1.53	20	

Batch: B013432 **Prep:** /SW846 3010A



Analytical QC Summary

Client: Environmental Restoration

TCLP Metals - Quality Control

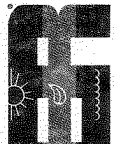
Work Order: 11D0305

Project: Markham, IL

Batch: B013432 Prep: /SW846 3010A

TCLP Metals by ICP

Sample ID: Blank (B013432-BLK1)		Method: 1311/6010B		Prepped: 04/12/2011 12:20	
Source:				Analyzed: 04/13/2011 15:36	
Analyte	Result	Limit	Units	Level	Result %REC Limits RPD Limit Qual
Lead	ND	0.00750	mg/L		
Sample ID: LCS (B013432-BS1)		Method: 1311/6010B		Prepped: 04/12/2011 12:20	
Source:				Analyzed: 04/13/2011 16:08	
Analyte	Result	Limit	Units	Level	Result %REC Limits RPD Limit Qual
Lead	2.06	0.00750	mg/L	2.000	103 80-120 0
Sample ID: Matrix Spike (B013432-MS1)		Method: 1311/6010B		Prepped: 04/12/2011 12:20	
Source: 11D0298-20				Analyzed: 04/13/2011 16:25	
Analyte	Result	Limit	Units	Level	Result %REC Limits RPD Limit Qual
Lead	1.95	0.00750	mg/L	2.000	ND 97.4 50-200 20
Sample ID: Matrix Spike (B013432-MS2)		Method: 1311/6010B		Prepped: 04/12/2011 12:20	
Source: 11D0391-08				Analyzed: 04/13/2011 18:55	
Analyte	Result	Limit	Units	Level	Result %REC Limits RPD Limit Qual
Lead	2.10	0.00750	mg/L	2.000	ND 105 50-200 20
Sample ID: Matrix Spike Dup (B013432-MSD1)		Method: 1311/6010B		Prepped: 04/12/2011 12:20	
Source: 11D0298-20				Analyzed: 04/13/2011 16:31	
Analyte	Result	Limit	Units	Level	Result %REC Limits RPD Limit Qual
Lead	1.92	0.00750	mg/L	2.000	ND 95.8 50-200 1.60 20
Sample ID: Matrix Spike Dup (B013432-MSD2)		Method: 1311/6010B		Prepped: 04/12/2011 12:20	
Source: 11D0391-08				Analyzed: 04/13/2011 19:01	
Analyte	Result	Limit	Units	Level	Result %REC Limits RPD Limit Qual
Lead	2.04	0.00750	mg/L	2.000	ND 102 50-200 2.84 20



ENVIRONMENTAL RESTORATION LLC

1666 Fabick Drive
Fenton, MO 63026
(636) 227-7477
Fax (636) 227-6447

11D0305 Kevin Falvey
ER - South Holland
Markham

Alternate billing information:

Report to: TOBY VETTER
Email to: t.vetter@erllc.com
City/State Collected: Markham IL

Project Name: Markham Dump
P.O. #: MDS-61

Date Results Needed:
Email? No Yes
Fax? No Yes

(Lab MUST Be Notified)
Same Day No Yes
Next Day No Yes
Two Day No Yes

Client: 312446 6325

Site/Facility ID #:

Rush

Signature: [Signature]

04/07/2011

Sample ID

MD

9-1-5

9-1-10

9-1-15

9-1-20

EL-5

EL-10

EL-15

EL-20

FF2-5

FF2-10

FF2-15

FF2-20

No. of Containers

1

1

1

1

1

1

1

1

1

1

1

1

Date

4-7-11

0900

Depth

Matrix*

Comp/Grab

Time

Date

Time

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May 26, 2011

Environmental Restoration
16660 South Canal Street
South Holland, IL 60437-

Work Order No.: 11E0515

Re: Markham Dump

Dear Toby Viehweg:

Microbac Laboratories, Inc. - Chicagoland Division received 10 sample(s) on 5/13/2011 10:15:00AM for the analyses presented in the following report as Work Order 11E0515.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Jeff Loewe, Division Manager at jeff.loewe@microbac.com. You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President at james.nokes@microbac.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Falvey". The signature is stylized with a large, looped "K" and a cursive "Falvey".

Kevin Falvey
Account Manager

**WORK ORDER SAMPLE SUMMARY****Date:** *Thursday, May 26, 2011***Client:** Environmental Restoration**Project:** Markham Dump**Lab Order:** 11E0515

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
11E0515-01	MD-NHL-1		05/06/2011 10:00	5/13/2011 10:15:00AM
11E0515-02	MD-BL-2		05/06/2011 10:00	5/13/2011 10:15:00AM
11E0515-03	MD-BG-3		05/06/2011 10:00	5/13/2011 10:15:00AM
11E0515-04	MD-AL-4		05/06/2011 10:00	5/13/2011 10:15:00AM
11E0515-05	MD-INK-5		05/06/2011 10:00	5/13/2011 10:15:00AM
11E0515-06	MD-OIL-6		05/06/2011 10:00	5/13/2011 10:15:00AM
11E0515-07	MD-BS-7		05/06/2011 10:00	5/13/2011 10:15:00AM
11E0515-08	MD-OXS-8		05/06/2011 10:00	5/13/2011 10:15:00AM
11E0515-09	MD-BAG-9		05/06/2011 10:00	5/13/2011 10:15:00AM
11E0515-10	MD-Chem-10		05/06/2011 10:00	5/13/2011 10:15:00AM



CASE NARRATIVE

Date: Thursday, May 26, 2011

Client: Environmental Restoration

Project: Markham Dump

Lab Order: 11E0515

B - the Method Blank associated with the MD-NHL-1, MD-BL-2, MD-AL-4, MD-BS-7, MD-OXS-8, and MD-Chem-10 samples contained Lead at a level above the reporting limit. This is considered insignificant, as the concentration in the sample was below the reporting limit.

Due to an error in the spike amount used in the LCS, MS, and MSD associated with the MD-INK-6 sample, the LCS failed the acceptance criteria with low bias for As Cr Se; the MS and MSD failed the accuracy criteria with low bias for As Sb Cr Se; the MSD failed the precision criteria for Ag Sb Cr. A Post Digestion Spike was analyzed and the acceptance criteria met.

The Matrix Spike Duplicate performed on the MD-BL-2 sample failed the precision criteria for Mercury. The accuracy criteria were met by both the MS and MSD. A Post Digestion Spike was analyzed and failed the acceptance criteria, indicating matrix interference.

H - sample received beyond the maximum allowable hold time for Reactive Sulfide.

The Laboratory Control Sample associated with the samples failed the precision criteria for Reactive Cyanide. This is considered insignificant, as the sample concentration was below the reporting limit.

B014810-MS1 and MSD1(Source sample=MB-BS-7) failed accuracy criteria with low bias for 1,1-Dichloroethene and other non-target analytes. Percent recoveries were good for all analytes for B014810-BS1.

Due to sample matrices, <30g of samples was used for MD-INK-5

B014861-MS1(Source sample=MD-INK-6) failed accuracy criteria with high bias for 1,4-Dichlorobenzene and other non-target analytes. MSD1 failed high for 1,2-Dichloroethane, 2-Butanone, surrogate 1,2-Dichloroethane-d4, and other non-target analytes.

Dilutions were performed on MD-NHL-1, MD-BG-3, MD-AL-4, and MD-INK-5 due to matrix issues, such as extreme pH and foaming.

S - The SVOA surrogate failure for sample MD-AL-4 is considered insignificant, as the bias was high yet the sample concentrations were below their respective reporting limits.



Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-NHL-1

Sample Description:

Matrix: Solid

Work Order/ID: 11E0515-01

Sampled: 05/06/2011 10:00

Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: 1311/8270C

Analyst: BR

TCLP Semivolatile Organic Compounds

Prep Date/Time: 05/18/2011 09:19

1,4-Dichlorobenzene	A	ND	0.86	48		mg/L	20	05/20/2011 15:28
2,4,5-Trichlorophenol	A	ND	1.4	48		mg/L	20	05/20/2011 15:28
2,4,6-Trichlorophenol	A	ND	0.86	48		mg/L	20	05/20/2011 15:28
2,4-Dinitrotoluene	A	ND	0.77	48		mg/L	20	05/20/2011 15:28
2-Methylphenol	A	ND	0.67	48		mg/L	20	05/20/2011 15:28
3/4-Methylphenol	A	ND	0.77	48		mg/L	20	05/20/2011 15:28
Hexachlorobenzene	A	ND	0.86	48		mg/L	20	05/20/2011 15:28
Hexachlorobutadiene	A	ND	0.86	48		mg/L	20	05/20/2011 15:28
Hexachloroethane	A	ND	0.86	48		mg/L	20	05/20/2011 15:28
Nitrobenzene	A	ND	0.96	48		mg/L	20	05/20/2011 15:28
Pentachlorophenol	A	ND	1.2	240		mg/L	20	05/20/2011 15:28
Pyridine	A	ND	3.2	48		mg/L	20	05/20/2011 15:28
Total Cresol	M	ND	1.3	48		mg/L	20	05/20/2011 15:28
Surr: 2,4,6-Tribromophenol	S	0.31		47.8-138	DS	%REC	20	05/20/2011 15:28
Surr: 2-Fluorobiphenyl	S	0.37		10-110	DS	%REC	20	05/20/2011 15:28
Surr: 2-Fluorophenol	S	0.00		10-110	D	%REC	20	05/20/2011 15:28
Surr: Nitrobenzene-d5	S	0.47		10-110	DS	%REC	20	05/20/2011 15:28
Surr: Phenol-d5	S	0.33		10-60.8	DS	%REC	20	05/20/2011 15:28
Surr: Terphenyl-d14	S	0.40		16.8-110	DS	%REC	20	05/20/2011 15:28

Method: 1311/8260B

Analyst: jln

TCLP VOA Zero Head Extraction

Prep Date/Time: 05/19/2011 08:38

1,1-Dichloroethene	A	ND	3.4	10		mg/L	2000	05/19/2011 18:15
1,2-Dichloroethane	A	ND	2.4	10		mg/L	2000	05/19/2011 18:15
2-Butanone	A	ND	7.2	20		mg/L	2000	05/19/2011 18:15
Benzene	A	ND	1.6	10		mg/L	2000	05/19/2011 18:15
Carbon tetrachloride	A	ND	3.4	10		mg/L	2000	05/19/2011 18:15
Chlorobenzene	A	ND	1.6	10		mg/L	2000	05/19/2011 18:15
Chloroform	A	ND	1.8	10		mg/L	2000	05/19/2011 18:15
Tetrachloroethene	A	ND	2.6	10		mg/L	2000	05/19/2011 18:15
Trichloroethene	A	ND	1.8	10		mg/L	2000	05/19/2011 18:15
Vinyl chloride	A	ND	1.8	4.0		mg/L	2000	05/19/2011 18:15
1,4-Dichlorobenzene	B	ND	1.4	20		mg/L	2000	05/19/2011 18:15
Surr: 1,2-Dichloroethane-d4	S	127.00		74.5-132		%REC	2000	05/19/2011 18:15
Surr: 4-Bromofluorobenzene	S	102.00		80-120		%REC	2000	05/19/2011 18:15
Surr: Dibromofluoromethane	S	106.00		80-120		%REC	2000	05/19/2011 18:15
Surr: Toluene-d8	S	99.80		80-120		%REC	2000	05/19/2011 18:15

Method: 1311/7470A

Analyst: SA

TCLP Mercury by CVAA

Prep Date/Time: 05/19/2011 09:10

Mercury	A	ND		0.0125		mg/L	1	05/20/2011 12:19
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Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-NHL-1

Sample Description:

Matrix: Solid

Work Order/ID: 11E0515-01

Sampled: 05/06/2011 10:00

Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B Analyst: SA								
TCLP Metals by ICP Prep Date/Time: 05/18/2011 09:55								
Arsenic	A	ND		0.250		mg/L	1	05/18/2011 18:18
Barium	A	ND		12.5		mg/L	1	05/18/2011 18:18
Cadmium	A	ND		0.0500		mg/L	1	05/18/2011 18:18
Chromium	A	ND		0.0750		mg/L	1	05/18/2011 18:18
Lead	A	ND		0.188	B	mg/L	1	05/18/2011 18:18
Selenium	A	ND		0.750		mg/L	1	05/18/2011 18:18
Silver	A	ND		0.250		mg/L	1	05/18/2011 18:18
Method: SW-846 1010 Analyst: TMG								
Ignitability (Closed Cup) Prep Date/Time: 05/20/2011 07:06								
Ignitability	A	> 170		30		°F	1	05/20/2011 7:06
Method: SW-846 9095B Analyst: ABG								
Paint Filter Prep Date/Time: 05/20/2011 14:15								
Paint Filter	A	Fail		0.0		Pass/Fail	1	05/20/2011 15:14
Method: SW-846 9045C Analyst: ABG								
pH Prep Date/Time: 05/20/2011 14:15								
pH	A	7.33		2.00		pH Units	1	05/20/2011 15:11
Method: SW-846 9066 Analyst: EINIK								
Total Phenolics Prep Date/Time: 05/17/2011 11:30								
Phenolics, Total Recoverable	A	2.8		0.46		mg/Kg	1	05/18/2011 13:20
Method: Chapter 7/9014 Analyst: GOEHL								
Reactive Cyanide Prep Date/Time: 05/20/2011 09:15								
Reactive Cyanide	A	ND		9.9		mg/Kg	1	05/20/2011 14:30
Method: Chapter 7/9034 Analyst: ABG								
Reactive Sulfide Prep Date/Time: 05/20/2011 09:15								
Reactive Sulfide	A	ND		9.9	H	mg/Kg	1	05/20/2011 15:37



Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-BL-2

Sample Description:

Matrix: Solid

Work Order/ID: 11E0515-02

Sampled: 05/06/2011 10:00

Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: 1311/8270C

Analyst: BR

Prep Date/Time: 05/18/2011 09:19

TCLP Semivolatile Organic Compounds

1,4-Dichlorobenzene	A	ND	0.0018	0.10		mg/L	1	05/20/2011 17:26
2,4,5-Trichlorophenol	A	ND	0.0030	0.10		mg/L	1	05/20/2011 17:26
2,4,6-Trichlorophenol	A	ND	0.0018	0.10		mg/L	1	05/20/2011 17:26
2,4-Dinitrotoluene	A	ND	0.0016	0.10		mg/L	1	05/20/2011 17:26
2-Methylphenol	A	0.026	0.0014	0.10	J	mg/L	1	05/20/2011 17:26
3/4-Methylphenol	A	ND	0.0016	0.10		mg/L	1	05/20/2011 17:26
Hexachlorobenzene	A	ND	0.0018	0.10		mg/L	1	05/20/2011 17:26
Hexachlorobutadiene	A	ND	0.0018	0.10		mg/L	1	05/20/2011 17:26
Hexachloroethane	A	ND	0.0018	0.10		mg/L	1	05/20/2011 17:26
Nitrobenzene	A	ND	0.0020	0.10		mg/L	1	05/20/2011 17:26
Pentachlorophenol	A	ND	0.0026	0.50		mg/L	1	05/20/2011 17:26
Pyridine	A	ND	0.0066	0.10		mg/L	1	05/20/2011 17:26
Total Cresol	M	0.026	0.0028	0.10	J	mg/L	1	05/20/2011 17:26
Surr: 2,4,6-Tribromophenol	S	59.80		47.8-138		%REC	1	05/20/2011 17:26
Surr: 2-Fluorobiphenyl	S	46.60		10-110		%REC	1	05/20/2011 17:26
Surr: 2-Fluorophenol	S	69.00		10-110		%REC	1	05/20/2011 17:26
Surr: Nitrobenzene-d5	S	50.00		10-110		%REC	1	05/20/2011 17:26
Surr: Phenol-d5	S	114.00		10-60.8	S	%REC	1	05/20/2011 17:26
Surr: Terphenyl-d14	S	57.30		16.8-110		%REC	1	05/20/2011 17:26

Method: 1311/8260B

Analyst: jln

Prep Date/Time: 05/20/2011 08:23

TCLP VOA Zero Head Extraction

1,1-Dichloroethene	A	ND	8.5	25		mg/L	5000	05/20/2011 13:22
1,2-Dichloroethane	A	ND	6.0	25		mg/L	5000	05/20/2011 13:22
2-Butanone	A	ND	18	50		mg/L	5000	05/20/2011 13:22
Benzene	A	ND	4.0	25		mg/L	5000	05/20/2011 13:22
Carbon tetrachloride	A	ND	8.5	25		mg/L	5000	05/20/2011 13:22
Chlorobenzene	A	ND	4.0	25		mg/L	5000	05/20/2011 13:22
Chloroform	A	ND	4.5	25		mg/L	5000	05/20/2011 13:22
Tetrachloroethene	A	ND	6.5	25		mg/L	5000	05/20/2011 13:22
Trichloroethene	A	ND	4.5	25		mg/L	5000	05/20/2011 13:22
Vinyl chloride	A	ND	4.5	10		mg/L	5000	05/20/2011 13:22
1,4-Dichlorobenzene	B	ND	3.5	50		mg/L	5000	05/20/2011 13:22
Surr: 1,2-Dichloroethane-d4	S	89.60		74.5-132		%REC	5000	05/20/2011 13:22
Surr: 4-Bromofluorobenzene	S	105.00		80-120		%REC	5000	05/20/2011 13:22
Surr: Dibromofluoromethane	S	87.70		80-120		%REC	5000	05/20/2011 13:22
Surr: Toluene-d8	S	106.00		80-120		%REC	5000	05/20/2011 13:22

Method: 1311/7470A

Analyst: SA

Prep Date/Time: 05/19/2011 09:10

TCLP Mercury by CVAA

Mercury	A	ND		0.0125		mg/L	1	05/20/2011 12:21
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Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration
Client Project: Markham Dump
Client Sample ID: MD-BL-2
Sample Description:
Matrix: Solid

Work Order/ID: 11E0515-02
Sampled: 05/06/2011 10:00
Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B Analyst: SA								
TCLP Metals by ICP Prep Date/Time: 05/18/2011 09:55								
Arsenic	A	7.70		0.250		mg/L	1	05/18/2011 18:23
Barium	A	ND		12.5		mg/L	1	05/18/2011 18:23
Cadmium	A	0.0675		0.0500		mg/L	1	05/18/2011 18:23
Chromium	A	ND		0.0750		mg/L	1	05/18/2011 18:23
Lead	A	ND		0.188	B	mg/L	1	05/18/2011 18:23
Selenium	A	0.805		0.750		mg/L	1	05/18/2011 18:23
Silver	A	0.418		0.250		mg/L	1	05/18/2011 18:23
Method: SW-846 1010 Analyst: TMG								
Ignitability (Closed Cup) Prep Date/Time: 05/20/2011 11:46								
Ignitability	A	> 170		30		°F	1	05/20/2011 11:46
Method: SW-846 9095B Analyst: ABG								
Paint Filter Prep Date/Time: 05/20/2011 14:15								
Paint Filter	A	Fail		0.0		Pass/Fail	1	05/20/2011 15:14
Method: SW-846 9045C Analyst: ABG								
pH Prep Date/Time: 05/20/2011 14:15								
pH	A	12.4		2.00		pH Units	1	05/20/2011 15:11
Method: SW-846 9066 Analyst: EINIK								
Total Phenolics Prep Date/Time: 05/17/2011 11:30								
Phenolics, Total Recoverable	A	ND		0.47		mg/Kg	1	05/18/2011 13:20
Method: Chapter 7/9014 Analyst: GOEHL								
Reactive Cyanide Prep Date/Time: 05/20/2011 09:15								
Reactive Cyanide	A	ND		10		mg/Kg	1	05/20/2011 14:32
Method: Chapter 7/9034 Analyst: ABG								
Reactive Sulfide Prep Date/Time: 05/20/2011 09:15								
Reactive Sulfide	A	ND		10	H	mg/Kg	1	05/20/2011 15:37



Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration
Client Project: Markham Dump
Client Sample ID: MD-BG-3
Sample Description:
Matrix: Solid

Work Order/ID: 11E0515-03
Sampled: 05/06/2011 10:00
Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: 1311/8270C

Analyst: BR

TCLP Semivolatile Organic Compounds

Prep Date/Time: 05/18/2011 09:19

1,4-Dichlorobenzene	A	ND	0.072	4.0		mg/L	20	05/20/2011 14:07
2,4,5-Trichlorophenol	A	ND	0.12	4.0		mg/L	20	05/20/2011 14:07
2,4,6-Trichlorophenol	A	ND	0.072	4.0		mg/L	20	05/20/2011 14:07
2,4-Dinitrotoluene	A	ND	0.064	4.0		mg/L	20	05/20/2011 14:07
2-Methylphenol	A	ND	0.056	4.0		mg/L	20	05/20/2011 14:07
3/4-Methylphenol	A	ND	0.064	4.0		mg/L	20	05/20/2011 14:07
Hexachlorobenzene	A	ND	0.072	4.0		mg/L	20	05/20/2011 14:07
Hexachlorobutadiene	A	ND	0.072	4.0		mg/L	20	05/20/2011 14:07
Hexachloroethane	A	ND	0.072	4.0		mg/L	20	05/20/2011 14:07
Nitrobenzene	A	ND	0.080	4.0		mg/L	20	05/20/2011 14:07
Pentachlorophenol	A	ND	0.10	20		mg/L	20	05/20/2011 14:07
Pyridine	A	ND	0.26	4.0		mg/L	20	05/20/2011 14:07
Total Cresol	M	ND	0.11	4.0		mg/L	20	05/20/2011 14:07
Surr: 2,4,6-Tribromophenol	S	3.19		47.8-138	DS	%REC	20	05/20/2011 14:07
Surr: 2-Fluorobiphenyl	S	3.31		10-110	DS	%REC	20	05/20/2011 14:07
Surr: 2-Fluorophenol	S	3.51		10-110	DS	%REC	20	05/20/2011 14:07
Surr: Nitrobenzene-d5	S	3.11		10-110	DS	%REC	20	05/20/2011 14:07
Surr: Phenol-d5	S	3.20		10-60.8	DS	%REC	20	05/20/2011 14:07
Surr: Terphenyl-d14	S	0.81		16.8-110	DS	%REC	20	05/20/2011 14:07

Method: 1311/8260B

Analyst: jln

TCLP VOA Zero Head Extraction

Prep Date/Time: 05/19/2011 08:38

1,1-Dichloroethene	A	ND	0.085	0.25		mg/L	50	05/19/2011 14:20
1,2-Dichloroethane	A	ND	0.060	0.25		mg/L	50	05/19/2011 14:20
2-Butanone	A	ND	0.18	0.50		mg/L	50	05/19/2011 14:20
Benzene	A	ND	0.040	0.25		mg/L	50	05/19/2011 14:20
Carbon tetrachloride	A	ND	0.085	0.25		mg/L	50	05/19/2011 14:20
Chlorobenzene	A	ND	0.040	0.25		mg/L	50	05/19/2011 14:20
Chloroform	A	ND	0.045	0.25		mg/L	50	05/19/2011 14:20
Tetrachloroethene	A	ND	0.065	0.25		mg/L	50	05/19/2011 14:20
Trichloroethene	A	ND	0.045	0.25		mg/L	50	05/19/2011 14:20
Vinyl chloride	A	ND	0.045	0.10		mg/L	50	05/19/2011 14:20
1,4-Dichlorobenzene	B	ND	0.035	0.50		mg/L	50	05/19/2011 14:20
Surr: 1,2-Dichloroethane-d4	S	125.00		74.5-132		%REC	50	05/19/2011 14:20
Surr: 4-Bromofluorobenzene	S	98.30		80-120		%REC	50	05/19/2011 14:20
Surr: Dibromofluoromethane	S	104.00		80-120		%REC	50	05/19/2011 14:20
Surr: Toluene-d8	S	99.00		80-120		%REC	50	05/19/2011 14:20

Method: 1311/7470A

Analyst: RPL

TCLP Mercury by CVAA

Prep Date/Time: 05/18/2011 10:36

Mercury	A	ND		0.00100		mg/L	1	05/18/2011 14:10
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Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration
 Client Project: Markham Dump
 Client Sample ID: MD-BG-3
 Sample Description:
 Matrix: Solid

Work Order/ID: 11E0515-03
 Sampled: 05/06/2011 10:00
 Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: 1311/6010B

Analyst: SA

TCLP Metals by ICP

Prep Date/Time: 05/18/2011 09:55

Arsenic	A	ND		0.0100		mg/L	1	05/18/2011 16:28
Barium	A	ND		0.500		mg/L	1	05/18/2011 16:28
Cadmium	A	ND		0.00200		mg/L	1	05/18/2011 16:28
Chromium	A	ND		0.00300		mg/L	1	05/18/2011 16:28
Lead	A	ND		0.00750		mg/L	1	05/18/2011 16:28
Selenium	A	ND		0.0300		mg/L	1	05/18/2011 16:28
Silver	A	ND		0.0100		mg/L	1	05/18/2011 16:28

Method: ASTM D92-90 Modified

Analyst: TMG

Ignitability (Open Cup)

Prep Date/Time: 05/20/2011 08:53

Ignitability	A	> 170		30		°F	1	05/20/2011 8:53
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Method: SW-846 9095B

Analyst: ABG

Paint Filter

Prep Date/Time: 05/20/2011 14:15

Paint Filter	A	Fail		0.0		Pass/Fail	1	05/20/2011 15:14
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Method: SW-846 9045C

Analyst: ABG

pH

Prep Date/Time: 05/20/2011 14:15

pH	A	9.17		2.00		pH Units	1	05/20/2011 15:11
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Method: SW-846 9066

Analyst: EINIK

Total Phenolics

Prep Date/Time: 05/17/2011 11:30

Phenolics, Total Recoverable	A	68		0.47		mg/Kg	1	05/18/2011 13:21
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Method: Chapter 7/9014

Analyst: GOEHL

Reactive Cyanide

Prep Date/Time: 05/20/2011 09:15

Reactive Cyanide	A	ND		9.9		mg/Kg	1	05/20/2011 14:33
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Method: Chapter 7/9034

Analyst: ABG

Reactive Sulfide

Prep Date/Time: 05/20/2011 09:15

Reactive Sulfide	A	ND		9.9	H	mg/Kg	1	05/20/2011 15:37
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Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration
Client Project: Markham Dump
Client Sample ID: MD-AL-4
Sample Description:
Matrix: Solid

Work Order/ID: 11E0515-04
Sampled: 05/06/2011 10:00
Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: 1311/8270C

Analyst: BR

TCLP Semivolatile Organic Compounds

Prep Date/Time: 05/20/2011 00:00

1,4-Dichlorobenzene	A	ND	90	50000		mg/L	100	05/23/2011 13:53
2,4,5-Trichlorophenol	A	ND	150	50000		mg/L	100	05/23/2011 13:53
2,4,6-Trichlorophenol	A	ND	90	50000		mg/L	100	05/23/2011 13:53
2,4-Dinitrotoluene	A	ND	80	50000		mg/L	100	05/23/2011 13:53
2-Methylphenol	A	ND	70	50000		mg/L	100	05/23/2011 13:53
3/4-Methylphenol	A	ND	80	50000		mg/L	100	05/23/2011 13:53
Hexachlorobenzene	A	ND	90	50000		mg/L	100	05/23/2011 13:53
Hexachlorobutadiene	A	ND	90	50000		mg/L	100	05/23/2011 13:53
Hexachloroethane	A	ND	90	50000		mg/L	100	05/23/2011 13:53
Nitrobenzene	A	ND	100	50000		mg/L	100	05/23/2011 13:53
Pentachlorophenol	A	ND	130	250000		mg/L	100	05/23/2011 13:53
Pyridine	A	ND	300	50000		mg/L	100	05/23/2011 13:53
Total Cresol	M	ND	140	50000		mg/L	100	05/23/2011 13:53
Surr: 2,4,6-Tribromophenol	S	96.60		47.8-138		%REC	100	05/23/2011 13:53
Surr: 2-Fluorobiphenyl	S	150.00		10-110	S	%REC	100	05/23/2011 13:53
Surr: 2-Fluorophenol	S	90.10		10-110		%REC	100	05/23/2011 13:53
Surr: Nitrobenzene-d5	S	139.00		10-110	S	%REC	100	05/23/2011 13:53
Surr: Phenol-d5	S	87.60		10-60.8	S	%REC	100	05/23/2011 13:53
Surr: Terphenyl-d14	S	180.00		16.8-110	S	%REC	100	05/23/2011 13:53

Method: 1311/8260B

Analyst: jln

TCLP VOA Zero Head Extraction

Prep Date/Time: 05/19/2011 08:38

1,1-Dichloroethene	A	ND	8.5	25		mg/L	5000	05/19/2011 17:46
1,2-Dichloroethane	A	ND	6.0	25		mg/L	5000	05/19/2011 17:46
2-Butanone	A	ND	18	50		mg/L	5000	05/19/2011 17:46
Benzene	A	ND	4.0	25		mg/L	5000	05/19/2011 17:46
Carbon tetrachloride	A	ND	8.5	25		mg/L	5000	05/19/2011 17:46
Chlorobenzene	A	ND	4.0	25		mg/L	5000	05/19/2011 17:46
Chloroform	A	ND	4.5	25		mg/L	5000	05/19/2011 17:46
Tetrachloroethene	A	ND	6.5	25		mg/L	5000	05/19/2011 17:46
Trichloroethene	A	ND	4.5	25		mg/L	5000	05/19/2011 17:46
Vinyl chloride	A	ND	4.5	10		mg/L	5000	05/19/2011 17:46
1,4-Dichlorobenzene	B	ND	3.5	50		mg/L	5000	05/19/2011 17:46
Surr: 1,2-Dichloroethane-d4	S	128.00		74.5-132		%REC	5000	05/19/2011 17:46
Surr: 4-Bromofluorobenzene	S	100.00		80-120		%REC	5000	05/19/2011 17:46
Surr: Dibromofluoromethane	S	102.00		80-120		%REC	5000	05/19/2011 17:46
Surr: Toluene-d8	S	100.00		80-120		%REC	5000	05/19/2011 17:46

Method: 1311/7470A

Analyst: SA

TCLP Mercury by CVAA

Prep Date/Time: 05/19/2011 09:10

Mercury	A	ND		0.00250		mg/L	1	05/20/2011 12:42
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Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration
Client Project: Markham Dump
Client Sample ID: MD-AL-4
Sample Description:
Matrix: Solid

Work Order/ID: 11E0515-04
Sampled: 05/06/2011 10:00
Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B Analyst: SA								
TCLP Metals by ICP Prep Date/Time: 05/18/2011 09:55								
Arsenic	A	ND		0.0500		mg/L	1	05/18/2011 18:29
Barium	A	ND		2.50		mg/L	1	05/18/2011 18:29
Cadmium	A	ND		0.0100		mg/L	1	05/18/2011 18:29
Chromium	A	ND		0.0150		mg/L	1	05/18/2011 18:29
Lead	A	ND		0.0375	B	mg/L	1	05/18/2011 18:29
Selenium	A	0.816		0.150		mg/L	1	05/18/2011 18:29
Silver	A	ND		0.0500		mg/L	1	05/18/2011 18:29
Method: SW-846 1010 Analyst: TMG								
Ignitability (Closed Cup) Prep Date/Time: 05/20/2011 08:57								
Ignitability	A	> 170		30		°F	1	05/20/2011 8:57
Method: SW-846 9095B Analyst: ABG								
Paint Filter Prep Date/Time: 05/20/2011 14:15								
Paint Filter	A	Fail		0.0		Pass/Fail	1	05/20/2011 15:14
Method: SW-846 9045C Analyst: ABG								
pH Prep Date/Time: 05/20/2011 14:15								
pH	A	< 2.00		2.00		pH Units	1	05/20/2011 15:11
Method: SW-846 9066 Analyst: EINIK								
Total Phenolics Prep Date/Time: 05/17/2011 11:30								
Phenolics, Total Recoverable	A	29		0.48		mg/Kg	1	05/18/2011 13:36



Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-INK-5

Sample Description:

Matrix: Solid

Work Order/ID: 11E0515-05

Sampled: 05/06/2011 10:00

Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: SW-846 8082

Analyst: clr

Prep Date/Time: 05/17/2011 09:13

Polychlorinated Biphenyls

Aroclor 1016	A	ND		980		µg/Kg	1	05/20/2011 4:31
Aroclor 1221	A	ND		980		µg/Kg	1	05/20/2011 4:31
Aroclor 1232	A	ND		980		µg/Kg	1	05/20/2011 4:31
Aroclor 1242	A	ND		980		µg/Kg	1	05/20/2011 4:31
Aroclor 1248	A	ND		980		µg/Kg	1	05/20/2011 4:31
Aroclor 1254	A	ND		980		µg/Kg	1	05/20/2011 4:31
Aroclor 1260	A	ND		980		µg/Kg	1	05/20/2011 4:31
Aroclor 1262	A	ND		980		µg/Kg	1	05/20/2011 4:31
Aroclor 1268	A	ND		980		µg/Kg	1	05/20/2011 4:31
Total PCB's	A	ND		980		µg/Kg	1	05/20/2011 4:31
Surr: Decachlorobiphenyl	S	80.00		38-128		%REC	1	05/20/2011 4:31
Surr: Tetrachloro-m-xylene	S	90.00		40-130		%REC	1	05/20/2011 4:31

Method: 1311/8270C

Analyst: BR

Prep Date/Time: 05/18/2011 09:19

TCLP Semivolatile Organic Compounds

1,4-Dichlorobenzene	A	ND	0.0036	0.20		mg/L	1	05/20/2011 17:46
2,4,5-Trichlorophenol	A	ND	0.0060	0.20		mg/L	1	05/20/2011 17:46
2,4,6-Trichlorophenol	A	ND	0.0036	0.20		mg/L	1	05/20/2011 17:46
2,4-Dinitrotoluene	A	ND	0.0032	0.20		mg/L	1	05/20/2011 17:46
2-Methylphenol	A	ND	0.0028	0.20		mg/L	1	05/20/2011 17:46
3/4-Methylphenol	A	ND	0.0032	0.20		mg/L	1	05/20/2011 17:46
Hexachlorobenzene	A	ND	0.0036	0.20		mg/L	1	05/20/2011 17:46
Hexachlorobutadiene	A	ND	0.0036	0.20		mg/L	1	05/20/2011 17:46
Hexachloroethane	A	ND	0.0036	0.20		mg/L	1	05/20/2011 17:46
Nitrobenzene	A	ND	0.0040	0.20		mg/L	1	05/20/2011 17:46
Pentachlorophenol	A	ND	0.0052	1.0		mg/L	1	05/20/2011 17:46
Pyridine	A	ND	0.013	0.20		mg/L	1	05/20/2011 17:46
Total Cresol	M	ND	0.0056	0.20		mg/L	1	05/20/2011 17:46
Surr: 2,4,6-Tribromophenol	S	97.90		47.8-138		%REC	1	05/20/2011 17:46
Surr: 2-Fluorobiphenyl	S	55.40		10-110		%REC	1	05/20/2011 17:46
Surr: 2-Fluorophenol	S	74.70		10-110		%REC	1	05/20/2011 17:46
Surr: Nitrobenzene-d5	S	56.60		10-110		%REC	1	05/20/2011 17:46
Surr: Phenol-d5	S	102.00		10-60.8	S	%REC	1	05/20/2011 17:46
Surr: Terphenyl-d14	S	69.20		16.8-110		%REC	1	05/20/2011 17:46

Method: 1311/8260B

Analyst: jln

Prep Date/Time: 05/19/2011 08:38

TCLP VOA Zero Head Extraction

1,1-Dichloroethene	A	ND	0.085	0.25		mg/L	50	05/19/2011 15:16
1,2-Dichloroethane	A	ND	0.060	0.25		mg/L	50	05/19/2011 15:16
2-Butanone	A	ND	0.18	0.50		mg/L	50	05/19/2011 15:16
Benzene	A	ND	0.040	0.25		mg/L	50	05/19/2011 15:16
Carbon tetrachloride	A	ND	0.085	0.25		mg/L	50	05/19/2011 15:16
Chlorobenzene	A	ND	0.040	0.25		mg/L	50	05/19/2011 15:16



Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration
Client Project: Markham Dump
Client Sample ID: MD-INK-5
Sample Description:
Matrix: Solid

Work Order/ID: 11E0515-05
Sampled: 05/06/2011 10:00
Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: 1311/8260B

Analyst: jln

TCLP VOA Zero Head Extraction

Prep Date/Time: 05/19/2011 08:38

Chloroform	A	ND	0.045	0.25		mg/L	50	05/19/2011 15:16
Tetrachloroethene	A	ND	0.065	0.25		mg/L	50	05/19/2011 15:16
Trichloroethene	A	ND	0.045	0.25		mg/L	50	05/19/2011 15:16
Vinyl chloride	A	ND	0.045	0.10		mg/L	50	05/19/2011 15:16
1,4-Dichlorobenzene	B	ND	0.035	0.50		mg/L	50	05/19/2011 15:16
Surr: 1,2-Dichloroethane-d4	S	131.00		74.5-132		%REC	50	05/19/2011 15:16
Surr: 4-Bromofluorobenzene	S	103.00		80-120		%REC	50	05/19/2011 15:16
Surr: Dibromofluoromethane	S	106.00		80-120		%REC	50	05/19/2011 15:16
Surr: Toluene-d8	S	100.00		80-120		%REC	50	05/19/2011 15:16

Method: 1311/7470A

Analyst: RPL

TCLP Mercury by CVAA

Prep Date/Time: 05/18/2011 10:36

Mercury	A	ND		0.00100		mg/L	1	05/18/2011 14:12
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Method: 1311/6010B

Analyst: SA

TCLP Metals by ICP

Prep Date/Time: 05/18/2011 09:55

Arsenic	A	ND		0.0100		mg/L	1	05/18/2011 16:55
Barium	A	ND		0.500		mg/L	1	05/18/2011 16:55
Cadmium	A	ND		0.00200		mg/L	1	05/18/2011 16:55
Chromium	A	0.0474		0.00300		mg/L	1	05/18/2011 16:55
Lead	A	0.0436		0.00750		mg/L	1	05/18/2011 16:55
Selenium	A	ND		0.0300		mg/L	1	05/18/2011 16:55
Silver	A	ND		0.0100		mg/L	1	05/18/2011 16:55

Method: SW-846 1010

Analyst: TMG

Ignitability (Closed Cup)

Prep Date/Time: 05/20/2011 16:41

Ignitability	A	> 170		30		°F	1	05/20/2011 16:41
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Method: SW-846 9095B

Analyst: ABG

Paint Filter

Prep Date/Time: 05/20/2011 14:15

Paint Filter	A	Fail		0.0		Pass/Fail	1	05/20/2011 15:14
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Method: SW-846 9045C

Analyst: ABG

pH

Prep Date/Time: 05/20/2011 14:15

pH	A	9.90		2.00		pH Units	1	05/20/2011 15:11
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Method: SW-846 9066

Analyst: EINI

Total Phenolics

Prep Date/Time: 05/17/2011 11:30

Phenolics, Total Recoverable	A	1.4		0.48		mg/Kg	1	05/18/2011 13:37
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Method: Chapter 7/9014

Analyst: GOEHL

Reactive Cyanide

Prep Date/Time: 05/20/2011 09:15

Reactive Cyanide	A	ND		9.9		mg/Kg	1	05/20/2011 14:35
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Method: Chapter 7/9034

Analyst: ABG

Reactive Sulfide

Prep Date/Time: 05/20/2011 09:15



Analytical Results

Date: Thursday, May 26, 2011

Client:	Environmental Restoration		
Client Project:	Markham Dump		
Client Sample ID:	MD-INK-5	Work Order/ID:	11E0515-05
Sample Description:		Sampled:	05/06/2011 10:00
Matrix:	Solid	Received:	05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: Chapter 7/9034					Analyst: ABG			
Reactive Sulfide					Prep Date/Time: 05/20/2011 09:15			
Reactive Sulfide	A	ND		9.9	H	mg/Kg	1	05/20/2011 15:37



Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-OIL-6

Sample Description:

Matrix: Solid

Work Order/ID: 11E0515-06

Sampled: 05/06/2011 10:00

Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: SW-846 8082

Analyst: clr

Polychlorinated Biphenyls

Prep Date/Time: 05/19/2011 10:12

Aroclor 1016	A	ND		990		µg/Kg	1	05/19/2011 21:38
Aroclor 1221	A	ND		990		µg/Kg	1	05/19/2011 21:38
Aroclor 1232	A	ND		990		µg/Kg	1	05/19/2011 21:38
Aroclor 1242	A	ND		990		µg/Kg	1	05/19/2011 21:38
Aroclor 1248	A	ND		990		µg/Kg	1	05/19/2011 21:38
Aroclor 1254	A	ND		990		µg/Kg	1	05/19/2011 21:38
Aroclor 1260	A	10000		990		µg/Kg	1	05/19/2011 21:38
Aroclor 1262	A	ND		990		µg/Kg	1	05/19/2011 21:38
Aroclor 1268	A	ND		990		µg/Kg	1	05/19/2011 21:38
Total PCB's	A	10000		990		µg/Kg	1	05/19/2011 21:38
Surr: Decachlorobiphenyl	S	75.00		52.6-143		%REC	1	05/19/2011 21:38
Surr: Tetrachloro-m-xylene	S	85.00		51.3-135		%REC	1	05/19/2011 21:38

Method: 1311/8270C

Analyst: BR

TCLP Semivolatile Organic Compounds

Prep Date/Time: 05/19/2011 09:06

1,4-Dichlorobenzene	A	ND	0.018	1.0		mg/L	20	05/20/2011 14:48
2,4,5-Trichlorophenol	A	ND	0.030	1.0		mg/L	20	05/20/2011 14:48
2,4,6-Trichlorophenol	A	ND	0.018	1.0		mg/L	20	05/20/2011 14:48
2,4-Dinitrotoluene	A	ND	0.016	1.0		mg/L	20	05/20/2011 14:48
2-Methylphenol	A	0.13	0.014	1.0	J	mg/L	20	05/20/2011 14:48
3/4-Methylphenol	A	0.081	0.016	1.0	J	mg/L	20	05/20/2011 14:48
Hexachlorobenzene	A	ND	0.018	1.0		mg/L	20	05/20/2011 14:48
Hexachlorobutadiene	A	ND	0.018	1.0		mg/L	20	05/20/2011 14:48
Hexachloroethane	A	ND	0.018	1.0		mg/L	20	05/20/2011 14:48
Nitrobenzene	A	ND	0.020	1.0		mg/L	20	05/20/2011 14:48
Pentachlorophenol	A	ND	0.026	5.0		mg/L	20	05/20/2011 14:48
Pyridine	A	ND	0.066	1.0		mg/L	20	05/20/2011 14:48
Total Cresol	M	0.21	0.028	1.0	J	mg/L	20	05/20/2011 14:48
Surr: 2,4,6-Tribromophenol	S	3.71		47.8-138	DS	%REC	20	05/20/2011 14:48
Surr: 2-Fluorobiphenyl	S	3.29		10-110	DS	%REC	20	05/20/2011 14:48
Surr: 2-Fluorophenol	S	3.45		10-110	DS	%REC	20	05/20/2011 14:48
Surr: Nitrobenzene-d5	S	2.81		10-110	DS	%REC	20	05/20/2011 14:48
Surr: Phenol-d5	S	3.53		10-60.8	DS	%REC	20	05/20/2011 14:48
Surr: Terphenyl-d14	S	3.44		16.8-110	DS	%REC	20	05/20/2011 14:48

Method: 1311/8260B

Analyst: jln

TCLP VOA Zero Head Extraction

Prep Date/Time: 05/19/2011 08:38

1,1-Dichloroethene	A	ND	0.017	0.050		mg/L	10	05/19/2011 13:51
1,2-Dichloroethane	A	ND	0.012	0.050		mg/L	10	05/19/2011 13:51
2-Butanone	A	ND	0.036	0.10		mg/L	10	05/19/2011 13:51
Benzene	A	0.011	0.0080	0.050	J	mg/L	10	05/19/2011 13:51
Carbon tetrachloride	A	ND	0.017	0.050		mg/L	10	05/19/2011 13:51
Chlorobenzene	A	ND	0.0080	0.050		mg/L	10	05/19/2011 13:51



Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-OIL-6

Sample Description:

Matrix: Solid

Work Order/ID: 11E0515-06

Sampled: 05/06/2011 10:00

Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: 1311/8260B

Analyst: jln

TCLP VOA Zero Head Extraction

Prep Date/Time: 05/19/2011 08:38

Chloroform	A	ND	0.0090	0.050		mg/L	10	05/19/2011 13:51
Tetrachloroethene	A	ND	0.013	0.050		mg/L	10	05/19/2011 13:51
Trichloroethene	A	ND	0.0090	0.050		mg/L	10	05/19/2011 13:51
Vinyl chloride	A	ND	0.0090	0.020		mg/L	10	05/19/2011 13:51
1,4-Dichlorobenzene	B	ND	0.0070	0.10		mg/L	10	05/19/2011 13:51
Surr: 1,2-Dichloroethane-d4	S	121.00		74.5-132		%REC	10	05/19/2011 13:51
Surr: 4-Bromofluorobenzene	S	101.00		80-120		%REC	10	05/19/2011 13:51
Surr: Dibromofluoromethane	S	103.00		80-120		%REC	10	05/19/2011 13:51
Surr: Toluene-d8	S	102.00		80-120		%REC	10	05/19/2011 13:51

Method: 1311/7470A

Analyst: SA

TCLP Mercury by CVAA

Prep Date/Time: 05/19/2011 09:10

Mercury	A	ND		0.00100		mg/L	1	05/20/2011 12:15
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Method: 1311/6010B

Analyst: SA

TCLP Metals by ICP

Prep Date/Time: 05/19/2011 08:45

Arsenic	A	0.0432		0.0100		mg/L	1	05/19/2011 16:16
Barium	A	4.63		0.500		mg/L	1	05/19/2011 16:16
Cadmium	A	0.107		0.00200		mg/L	1	05/19/2011 16:16
Chromium	A	ND		0.00300		mg/L	1	05/19/2011 16:16
Lead	A	16.6		0.00750		mg/L	1	05/19/2011 16:16
Selenium	A	ND		0.0300		mg/L	1	05/19/2011 16:16
Silver	A	ND		0.0100		mg/L	1	05/19/2011 16:16

Method: SW-846 1010

Analyst: TMG

Ignitability (Closed Cup)

Prep Date/Time: 05/20/2011 15:35

Ignitability	A	> 170		30		°F	1	05/20/2011 15:35
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Method: SW-846 9095B

Analyst: ABG

Paint Filter

Prep Date/Time: 05/20/2011 14:15

Paint Filter	A	Fail		0.0		Pass/Fail	1	05/20/2011 15:14
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Method: SW-846 9045C

Analyst: ABG

pH

Prep Date/Time: 05/20/2011 14:15

pH	A	4.35		2.00		pH Units	1	05/20/2011 15:11
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Method: SW-846 9066

Analyst: EINI

Total Phenolics

Prep Date/Time: 05/17/2011 11:30

Phenolics, Total Recoverable	A	7.6		0.49		mg/Kg	1	05/18/2011 13:38
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Method: Chapter 7/9014

Analyst: GOEHL

Reactive Cyanide

Prep Date/Time: 05/20/2011 09:15

Reactive Cyanide	A	ND		9.9		mg/L	1	05/20/2011 14:36
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Method: Chapter 7/9034

Analyst: ABG

Reactive Sulfide

Prep Date/Time: 05/20/2011 09:15



Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-OIL-6

Sample Description:

Matrix: Solid

Work Order/ID: 11E0515-06

Sampled: 05/06/2011 10:00

Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: Chapter 7/9034					Analyst: ABG			
Reactive Sulfide					Prep Date/Time: 05/20/2011 09:15			
Reactive Sulfide	A	ND		9.9	H	mg/L	1	05/20/2011 15:37



Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration
 Client Project: Markham Dump
 Client Sample ID: MD-BS-7
 Sample Description:
 Matrix: Solid

Work Order/ID: 11E0515-07
 Sampled: 05/06/2011 10:00
 Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: 1311/8270C

Analyst: BR

TCLP Semivolatile Organic Compounds

Prep Date/Time: 05/18/2011 09:19

1,4-Dichlorobenzene	A	ND	0.00090	0.050		mg/L	1	05/20/2011 16:05
2,4,5-Trichlorophenol	A	ND	0.0015	0.050		mg/L	1	05/20/2011 16:05
2,4,6-Trichlorophenol	A	ND	0.00090	0.050		mg/L	1	05/20/2011 16:05
2,4-Dinitrotoluene	A	ND	0.00080	0.050		mg/L	1	05/20/2011 16:05
2-Methylphenol	A	0.0067	0.00070	0.050	J	mg/L	1	05/20/2011 16:05
3/4-Methylphenol	A	ND	0.00080	0.050		mg/L	1	05/20/2011 16:05
Hexachlorobenzene	A	ND	0.00090	0.050		mg/L	1	05/20/2011 16:05
Hexachlorobutadiene	A	ND	0.00090	0.050		mg/L	1	05/20/2011 16:05
Hexachloroethane	A	ND	0.00090	0.050		mg/L	1	05/20/2011 16:05
Nitrobenzene	A	ND	0.0010	0.050		mg/L	1	05/20/2011 16:05
Pentachlorophenol	A	ND	0.0013	0.25		mg/L	1	05/20/2011 16:05
Pyridine	A	ND	0.0033	0.050		mg/L	1	05/20/2011 16:05
Total Cresol	M	0.0067	0.0014	0.050	J	mg/L	1	05/20/2011 16:05
Surr: 2,4,6-Tribromophenol	S	93.00		47.8-138		%REC	1	05/20/2011 16:05
Surr: 2-Fluorobiphenyl	S	66.90		10-110		%REC	1	05/20/2011 16:05
Surr: 2-Fluorophenol	S	96.90		10-110		%REC	1	05/20/2011 16:05
Surr: Nitrobenzene-d5	S	60.00		10-110		%REC	1	05/20/2011 16:05
Surr: Phenol-d5	S	130.00		10-60.8	S	%REC	1	05/20/2011 16:05
Surr: Terphenyl-d14	S	71.70		16.8-110		%REC	1	05/20/2011 16:05

Method: 1311/8260B

Analyst: jln

TCLP VOA Zero Head Extraction

Prep Date/Time: 05/18/2011 08:00

1,1-Dichloroethene	A	ND	0.017	0.050		mg/L	10	05/18/2011 14:51
1,2-Dichloroethane	A	ND	0.012	0.050		mg/L	10	05/18/2011 14:51
2-Butanone	A	ND	0.036	0.10		mg/L	10	05/18/2011 14:51
Benzene	A	ND	0.0080	0.050		mg/L	10	05/18/2011 14:51
Carbon tetrachloride	A	ND	0.017	0.050		mg/L	10	05/18/2011 14:51
Chlorobenzene	A	ND	0.0080	0.050		mg/L	10	05/18/2011 14:51
Chloroform	A	ND	0.0090	0.050		mg/L	10	05/18/2011 14:51
Tetrachloroethene	A	ND	0.013	0.050		mg/L	10	05/18/2011 14:51
Trichloroethene	A	ND	0.0090	0.050		mg/L	10	05/18/2011 14:51
Vinyl chloride	A	ND	0.0090	0.020		mg/L	10	05/18/2011 14:51
1,4-Dichlorobenzene	B	ND	0.0070	0.10		mg/L	10	05/18/2011 14:51
Surr: 1,2-Dichloroethane-d4	S	96.70		74.5-132		%REC	10	05/18/2011 14:51
Surr: 4-Bromofluorobenzene	S	105.00		80-120		%REC	10	05/18/2011 14:51
Surr: Dibromofluoromethane	S	95.40		80-120		%REC	10	05/18/2011 14:51
Surr: Toluene-d8	S	103.00		80-120		%REC	10	05/18/2011 14:51

Method: 1311/7470A

Analyst: SA

TCLP Mercury by CVAA

Prep Date/Time: 05/19/2011 09:10

Mercury	A	ND		0.00100		mg/L	1	05/20/2011 12:43
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Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration
Client Project: Markham Dump
Client Sample ID: MD-BS-7
Sample Description:
Matrix: Solid

Work Order/ID: 11E0515-07
Sampled: 05/06/2011 10:00
Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: 1311/6010B

Analyst: SA

TCLP Metals by ICP

Prep Date/Time: 05/18/2011 09:55

Arsenic	A	0.0122		0.0100		mg/L	1	05/18/2011 18:45
Barium	A	ND		0.500		mg/L	1	05/18/2011 18:45
Cadmium	A	ND		0.00200		mg/L	1	05/18/2011 18:45
Chromium	A	ND		0.00300		mg/L	1	05/18/2011 18:45
Lead	A	ND		0.00750	B	mg/L	1	05/18/2011 18:45
Selenium	A	ND		0.0300		mg/L	1	05/18/2011 18:45
Silver	A	ND		0.0100		mg/L	1	05/18/2011 18:45

Method: SW-846 9095B

Analyst: ABG

Paint Filter

Prep Date/Time: 05/20/2011 14:15

Paint Filter	A	Pass		0.0		Pass/Fail	1	05/20/2011 15:14
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Method: SW-846 9045C

Analyst: ABG

pH

Prep Date/Time: 05/20/2011 14:15

pH	A	10.6		2.00		pH Units	1	05/20/2011 15:11
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Method: SW-846 9066

Analyst: EINIK

Total Phenolics

Prep Date/Time: 05/17/2011 11:30

Phenolics, Total Recoverable	A	ND		0.49		mg/Kg	1	05/18/2011 13:39
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Method: Chapter 7/9014

Analyst: GOEHL

Reactive Cyanide

Prep Date/Time: 05/20/2011 09:15

Reactive Cyanide	A	ND		9.9		mg/Kg	1	05/20/2011 14:37
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Method: Chapter 7/9034

Analyst: ABG

Reactive Sulfide

Prep Date/Time: 05/20/2011 09:15

Reactive Sulfide	A	ND		9.9	H	mg/Kg	1	05/20/2011 15:37
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Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration

Client Project: Markham Dump

Client Sample ID: MD-OXS-8

Sample Description:

Matrix: Solid

Work Order/ID: 11E0515-08

Sampled: 05/06/2011 10:00

Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: 1311/8270C

Analyst: BR

Prep Date/Time: 05/18/2011 09:19

TCLP Semivolatile Organic Compounds

1,4-Dichlorobenzene	A	ND	0.00090	0.050		mg/L	1	05/20/2011 18:06
2,4,5-Trichlorophenol	A	ND	0.0015	0.050		mg/L	1	05/20/2011 18:06
2,4,6-Trichlorophenol	A	ND	0.00090	0.050		mg/L	1	05/20/2011 18:06
2,4-Dinitrotoluene	A	ND	0.00080	0.050		mg/L	1	05/20/2011 18:06
2-Methylphenol	A	ND	0.00070	0.050		mg/L	1	05/20/2011 18:06
3/4-Methylphenol	A	ND	0.00080	0.050		mg/L	1	05/20/2011 18:06
Hexachlorobenzene	A	ND	0.00090	0.050		mg/L	1	05/20/2011 18:06
Hexachlorobutadiene	A	ND	0.00090	0.050		mg/L	1	05/20/2011 18:06
Hexachloroethane	A	ND	0.00090	0.050		mg/L	1	05/20/2011 18:06
Nitrobenzene	A	ND	0.0010	0.050		mg/L	1	05/20/2011 18:06
Pentachlorophenol	A	ND	0.0013	0.25		mg/L	1	05/20/2011 18:06
Pyridine	A	ND	0.0033	0.050		mg/L	1	05/20/2011 18:06
Total Cresol	M	ND	0.0014	0.050		mg/L	1	05/20/2011 18:06
Surr: 2,4,6-Tribromophenol	S	85.00		47.8-138		%REC	1	05/20/2011 18:06
Surr: 2-Fluorobiphenyl	S	41.80		10-110		%REC	1	05/20/2011 18:06
Surr: 2-Fluorophenol	S	52.50		10-110		%REC	1	05/20/2011 18:06
Surr: Nitrobenzene-d5	S	40.00		10-110		%REC	1	05/20/2011 18:06
Surr: Phenol-d5	S	82.80		10-60.8	S	%REC	1	05/20/2011 18:06
Surr: Terphenyl-d14	S	60.80		16.8-110		%REC	1	05/20/2011 18:06

Method: 1311/8260B

Analyst: jln

Prep Date/Time: 05/18/2011 08:00

TCLP VOA Zero Head Extraction

1,1-Dichloroethene	A	ND	0.017	0.050		mg/L	10	05/18/2011 15:19
1,2-Dichloroethane	A	ND	0.012	0.050		mg/L	10	05/18/2011 15:19
2-Butanone	A	ND	0.036	0.10		mg/L	10	05/18/2011 15:19
Benzene	A	ND	0.0080	0.050		mg/L	10	05/18/2011 15:19
Carbon tetrachloride	A	ND	0.017	0.050		mg/L	10	05/18/2011 15:19
Chlorobenzene	A	ND	0.0080	0.050		mg/L	10	05/18/2011 15:19
Chloroform	A	ND	0.0090	0.050		mg/L	10	05/18/2011 15:19
Tetrachloroethene	A	ND	0.013	0.050		mg/L	10	05/18/2011 15:19
Trichloroethene	A	ND	0.0090	0.050		mg/L	10	05/18/2011 15:19
Vinyl chloride	A	ND	0.0090	0.020		mg/L	10	05/18/2011 15:19
1,4-Dichlorobenzene	B	ND	0.0070	0.10		mg/L	10	05/18/2011 15:19
Surr: 1,2-Dichloroethane-d4	S	95.50		74.5-132		%REC	10	05/18/2011 15:19
Surr: 4-Bromofluorobenzene	S	108.00		80-120		%REC	10	05/18/2011 15:19
Surr: Dibromofluoromethane	S	94.20		80-120		%REC	10	05/18/2011 15:19
Surr: Toluene-d8	S	100.00		80-120		%REC	10	05/18/2011 15:19

Method: 1311/7470A

Analyst: SA

Prep Date/Time: 05/19/2011 09:10

TCLP Mercury by CVAA

Mercury	A	ND		0.00500		mg/L	1	05/20/2011 12:45
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Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration
Client Project: Markham Dump
Client Sample ID: MD-OXS-8
Sample Description:
Matrix: Solid

Work Order/ID: 11E0515-08
Sampled: 05/06/2011 10:00
Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B Analyst: SA								
TCLP Metals by ICP Prep Date/Time: 05/18/2011 09:55								
Arsenic	A	0.0998		0.0100		mg/L	1	05/18/2011 18:50
Barium	A	ND		0.500		mg/L	1	05/18/2011 18:50
Cadmium	A	ND		0.00200		mg/L	1	05/18/2011 18:50
Chromium	A	ND		0.00500		mg/L	1	05/18/2011 18:50
Lead	A	ND		0.0100	B	mg/L	1	05/18/2011 18:50
Selenium	A	ND		0.0300		mg/L	1	05/18/2011 18:50
Silver	A	ND		0.0100		mg/L	1	05/18/2011 18:50
Method: ASTM D92-90 Modified Analyst: TMG								
Ignitability (Open Cup) Prep Date/Time: 05/20/2011 11:46								
Ignitability	A	> 170		30		°F	1	05/20/2011 11:46
Method: SW-846 9095B Analyst: ABG								
Paint Filter Prep Date/Time: 05/20/2011 14:15								
Paint Filter	A	Fail		0.0		Pass/Fail	1	05/20/2011 15:14
Method: SW-846 9045C Analyst: ABG								
pH Prep Date/Time: 05/20/2011 14:15								
pH	A	9.95		2.00		pH Units	1	05/20/2011 15:11
Method: SW-846 9066 Analyst: EINIK								
Total Phenolics Prep Date/Time: 05/17/2011 11:30								
Phenolics, Total Recoverable	A	ND		0.48		mg/Kg	1	05/18/2011 13:40
Method: Chapter 7/9014 Analyst: GOEHL								
Reactive Cyanide Prep Date/Time: 05/20/2011 09:15								
Reactive Cyanide	A	ND		9.9		mg/Kg	1	05/20/2011 14:39
Method: Chapter 7/9034 Analyst: ABG								
Reactive Sulfide Prep Date/Time: 05/20/2011 09:15								
Reactive Sulfide	A	ND		9.9	H	mg/Kg	1	05/20/2011 15:37



Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration
 Client Project: Markham Dump
 Client Sample ID: MD-BAG-9
 Sample Description:
 Matrix: Solid

Work Order/ID: 11E0515-09
 Sampled: 05/06/2011 10:00
 Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: 1311/8270C

Analyst: BR

TCLP Semivolatile Organic Compounds

Prep Date/Time: 05/18/2011 09:19

1,4-Dichlorobenzene	A	ND	0.00090	0.050		mg/L	1	05/20/2011 18:26
2,4,5-Trichlorophenol	A	ND	0.0015	0.050		mg/L	1	05/20/2011 18:26
2,4,6-Trichlorophenol	A	ND	0.00090	0.050		mg/L	1	05/20/2011 18:26
2,4-Dinitrotoluene	A	ND	0.00080	0.050		mg/L	1	05/20/2011 18:26
2-Methylphenol	A	ND	0.00070	0.050		mg/L	1	05/20/2011 18:26
3/4-Methylphenol	A	ND	0.00080	0.050		mg/L	1	05/20/2011 18:26
Hexachlorobenzene	A	ND	0.00090	0.050		mg/L	1	05/20/2011 18:26
Hexachlorobutadiene	A	ND	0.00090	0.050		mg/L	1	05/20/2011 18:26
Hexachloroethane	A	ND	0.00090	0.050		mg/L	1	05/20/2011 18:26
Nitrobenzene	A	ND	0.0010	0.050		mg/L	1	05/20/2011 18:26
Pentachlorophenol	A	ND	0.0013	0.25		mg/L	1	05/20/2011 18:26
Pyridine	A	ND	0.0033	0.050		mg/L	1	05/20/2011 18:26
Total Cresol	M	ND	0.0014	0.050		mg/L	1	05/20/2011 18:26
Surr: 2,4,6-Tribromophenol	S	97.10		47.8-138		%REC	1	05/20/2011 18:26
Surr: 2-Fluorobiphenyl	S	56.40		10-110		%REC	1	05/20/2011 18:26
Surr: 2-Fluorophenol	S	87.30		10-110		%REC	1	05/20/2011 18:26
Surr: Nitrobenzene-d5	S	60.60		10-110		%REC	1	05/20/2011 18:26
Surr: Phenol-d5	S	134.00		10-60.8	S	%REC	1	05/20/2011 18:26
Surr: Terphenyl-d14	S	73.20		16.8-110		%REC	1	05/20/2011 18:26

Method: 1311/8260B

Analyst: jln

TCLP VOA Zero Head Extraction

Prep Date/Time: 05/18/2011 08:00

1,1-Dichloroethene	A	ND	0.017	0.050		mg/L	10	05/18/2011 15:48
1,2-Dichloroethane	A	ND	0.012	0.050		mg/L	10	05/18/2011 15:48
2-Butanone	A	ND	0.036	0.10		mg/L	10	05/18/2011 15:48
Benzene	A	ND	0.0080	0.050		mg/L	10	05/18/2011 15:48
Carbon tetrachloride	A	ND	0.017	0.050		mg/L	10	05/18/2011 15:48
Chlorobenzene	A	ND	0.0080	0.050		mg/L	10	05/18/2011 15:48
Chloroform	A	ND	0.0090	0.050		mg/L	10	05/18/2011 15:48
Tetrachloroethene	A	ND	0.013	0.050		mg/L	10	05/18/2011 15:48
Trichloroethene	A	ND	0.0090	0.050		mg/L	10	05/18/2011 15:48
Vinyl chloride	A	ND	0.0090	0.020		mg/L	10	05/18/2011 15:48
1,4-Dichlorobenzene	B	ND	0.0070	0.10		mg/L	10	05/18/2011 15:48
Surr: 1,2-Dichloroethane-d4	S	96.60		74.5-132		%REC	10	05/18/2011 15:48
Surr: 4-Bromofluorobenzene	S	108.00		80-120		%REC	10	05/18/2011 15:48
Surr: Dibromofluoromethane	S	99.50		80-120		%REC	10	05/18/2011 15:48
Surr: Toluene-d8	S	104.00		80-120		%REC	10	05/18/2011 15:48

Method: 1311/7470A

Analyst: RPL

TCLP Mercury by CVAA

Prep Date/Time: 05/18/2011 10:36

Mercury	A	ND		0.00100		mg/L	1	05/18/2011 14:13
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Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration
Client Project: Markham Dump
Client Sample ID: MD-BAG-9
Sample Description:
Matrix: Solid

Work Order/ID: 11E0515-09
Sampled: 05/06/2011 10:00
Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B Analyst: SA								
TCLP Metals by ICP Prep Date/Time: 05/18/2011 09:55								
Arsenic	A	ND		0.0100		mg/L	1	05/18/2011 17:01
Barium	A	ND		0.500		mg/L	1	05/18/2011 17:01
Cadmium	A	ND		0.00200		mg/L	1	05/18/2011 17:01
Chromium	A	ND		0.00300		mg/L	1	05/18/2011 17:01
Lead	A	ND		0.00750		mg/L	1	05/18/2011 17:01
Selenium	A	ND		0.0300		mg/L	1	05/18/2011 17:01
Silver	A	ND		0.0100		mg/L	1	05/18/2011 17:01
Method: ASTM D92-90 Modified Analyst: TMG								
Ignitability (Open Cup) Prep Date/Time: 05/20/2011 15:35								
Ignitability	A	> 170		30		°F	1	05/20/2011 15:35
Method: SW-846 9095B Analyst: ABG								
Paint Filter Prep Date/Time: 05/20/2011 14:15								
Paint Filter	A	Pass		0.0		Pass/Fail	1	05/20/2011 15:14
Method: SW-846 9045C Analyst: ABG								
pH Prep Date/Time: 05/20/2011 14:15								
pH	A	9.84		2.00		pH Units	1	05/20/2011 15:11
Method: SW-846 9066 Analyst: EINIK								
Total Phenolics Prep Date/Time: 05/17/2011 11:30								
Phenolics, Total Recoverable	A	ND		0.50		mg/Kg	1	05/18/2011 13:40
Method: Chapter 7/9014 Analyst: GOEHL								
Reactive Cyanide Prep Date/Time: 05/20/2011 09:15								
Reactive Cyanide	A	ND		10		mg/Kg	1	05/20/2011 14:40
Method: Chapter 7/9034 Analyst: ABG								
Reactive Sulfide Prep Date/Time: 05/20/2011 09:15								
Reactive Sulfide	A	ND		10	H	mg/Kg	1	05/20/2011 15:37



Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration
Client Project: Markham Dump
Client Sample ID: MD-Chem-10
Sample Description:
Matrix: Solid

Work Order/ID: 11E0515-10
Sampled: 05/06/2011 10:00
Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: 1311/8270C

Analyst: BR

TCLP Semivolatile Organic Compounds

Prep Date/Time: 05/18/2011 09:19

1,4-Dichlorobenzene	A	ND	0.018	1.0		mg/L	20	05/20/2011 13:27
2,4,5-Trichlorophenol	A	ND	0.030	1.0		mg/L	20	05/20/2011 13:27
2,4,6-Trichlorophenol	A	ND	0.018	1.0		mg/L	20	05/20/2011 13:27
2,4-Dinitrotoluene	A	ND	0.016	1.0		mg/L	20	05/20/2011 13:27
2-Methylphenol	A	ND	0.014	1.0		mg/L	20	05/20/2011 13:27
3/4-Methylphenol	A	ND	0.016	1.0		mg/L	20	05/20/2011 13:27
Hexachlorobenzene	A	ND	0.018	1.0		mg/L	20	05/20/2011 13:27
Hexachlorobutadiene	A	ND	0.018	1.0		mg/L	20	05/20/2011 13:27
Hexachloroethane	A	ND	0.018	1.0		mg/L	20	05/20/2011 13:27
Nitrobenzene	A	ND	0.020	1.0		mg/L	20	05/20/2011 13:27
Pentachlorophenol	A	ND	0.026	5.0		mg/L	20	05/20/2011 13:27
Pyridine	A	ND	0.066	1.0		mg/L	20	05/20/2011 13:27
Total Cresol	M	ND	0.028	1.0		mg/L	20	05/20/2011 13:27
Surr: 2,4,6-Tribromophenol	S	3.24		47.8-138	DS	%REC	20	05/20/2011 13:27
Surr: 2-Fluorobiphenyl	S	3.63		10-110	DS	%REC	20	05/20/2011 13:27
Surr: 2-Fluorophenol	S	4.08		10-110	DS	%REC	20	05/20/2011 13:27
Surr: Nitrobenzene-d5	S	3.84		10-110	DS	%REC	20	05/20/2011 13:27
Surr: Phenol-d5	S	4.00		10-60.8	DS	%REC	20	05/20/2011 13:27
Surr: Terphenyl-d14	S	3.94		16.8-110	DS	%REC	20	05/20/2011 13:27

Method: 1311/8260B

Analyst: jln

TCLP VOA Zero Head Extraction

Prep Date/Time: 05/18/2011 08:00

1,1-Dichloroethene	A	ND	0.017	0.050		mg/L	10	05/18/2011 16:17
1,2-Dichloroethane	A	ND	0.012	0.050		mg/L	10	05/18/2011 16:17
2-Butanone	A	ND	0.036	0.10		mg/L	10	05/18/2011 16:17
Benzene	A	ND	0.0080	0.050		mg/L	10	05/18/2011 16:17
Carbon tetrachloride	A	ND	0.017	0.050		mg/L	10	05/18/2011 16:17
Chlorobenzene	A	ND	0.0080	0.050		mg/L	10	05/18/2011 16:17
Chloroform	A	ND	0.0090	0.050		mg/L	10	05/18/2011 16:17
Tetrachloroethene	A	ND	0.013	0.050		mg/L	10	05/18/2011 16:17
Trichloroethene	A	ND	0.0090	0.050		mg/L	10	05/18/2011 16:17
Vinyl chloride	A	ND	0.0090	0.020		mg/L	10	05/18/2011 16:17
1,4-Dichlorobenzene	B	ND	0.0070	0.10		mg/L	10	05/18/2011 16:17
Surr: 1,2-Dichloroethane-d4	S	96.00		74.5-132		%REC	10	05/18/2011 16:17
Surr: 4-Bromofluorobenzene	S	105.00		80-120		%REC	10	05/18/2011 16:17
Surr: Dibromofluoromethane	S	96.30		80-120		%REC	10	05/18/2011 16:17
Surr: Toluene-d8	S	101.00		80-120		%REC	10	05/18/2011 16:17

Method: 1311/7470A

Analyst: SA

TCLP Mercury by CVAA

Prep Date/Time: 05/19/2011 09:10

Mercury	A	ND		0.00100		mg/L	1	05/20/2011 12:46
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Analytical Results

Date: Thursday, May 26, 2011

Client: Environmental Restoration
Client Project: Markham Dump
Client Sample ID: MD-Chem-10
Sample Description:
Matrix: Solid

Work Order/ID: 11E0515-10
Sampled: 05/06/2011 10:00
Received: 05/13/2011 10:15

Analyses	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B Analyst: SA								
Prep Date/Time: 05/18/2011 09:55								
TCLP Metals by ICP								
Arsenic	A	ND		0.0100		mg/L	1	05/18/2011 18:56
Barium	A	ND		0.500		mg/L	1	05/18/2011 18:56
Cadmium	A	ND		0.00200		mg/L	1	05/18/2011 18:56
Chromium	A	ND		0.00300		mg/L	1	05/18/2011 18:56
Lead	A	ND		0.0500	B	mg/L	1	05/18/2011 18:56
Nickel	A	0.0162		0.0100		mg/L	1	05/18/2011 18:56
Selenium	A	ND		0.0300		mg/L	1	05/18/2011 18:56
Silver	A	ND		0.0100		mg/L	1	05/18/2011 18:56
Method: ASTM D92-90 Modified Analyst: TMG								
Prep Date/Time: 05/20/2011 16:14								
Ignitability (Open Cup)								
Ignitability	A	> 170		30		°F	1	05/20/2011 16:14
Method: SW-846 9095B Analyst: ABG								
Prep Date/Time: 05/20/2011 14:15								
Paint Filter								
Paint Filter	A	Pass		0.0		Pass/Fail	1	05/20/2011 15:14
Method: SW-846 9045C Analyst: ABG								
Prep Date/Time: 05/20/2011 14:15								
pH								
pH	A	10.5		2.00		pH Units	1	05/20/2011 15:11
Method: SW-846 9066 Analyst: EINIK								
Prep Date/Time: 05/17/2011 11:30								
Total Phenolics								
Phenolics, Total Recoverable	A	ND		0.47		mg/Kg	1	05/18/2011 13:41
Method: Chapter 7/9014 Analyst: GOEHL								
Prep Date/Time: 05/20/2011 09:15								
Reactive Cyanide								
Reactive Cyanide	A	ND		10		mg/Kg	1	05/20/2011 14:42
Method: Chapter 7/9034 Analyst: ABG								
Prep Date/Time: 05/20/2011 09:15								
Reactive Sulfide								
Reactive Sulfide	A	ND		10	H	mg/Kg	1	05/20/2011 15:37

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed
mg/L	=	Milligrams per Liter (ppm)
mg/Kg	=	Milligrams per Kilogram (ppm)
U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
B	=	Detected in the associated method Blank at a concentration above the routine PQL/RL
D	=	Dilution performed on sample
ND	=	Not Detected at the Reporting Limit (or the Method Detection Limit, if used)
E	=	Value above quantitation range
H	=	Analyte was prepared and/or analyzed outside of the analytical method holding time
I	=	Matrix Interference
R	=	RPD outside accepted recovery limits
S	=	Spike recovery outside recovery limits
Surr	=	Surrogate
DF	=	Dilution Factor
RL	=	Reporting Limit
MDL	=	Method Detection Limit
NR	=	Not Recovered

ANALYTE TYPES: (AT)

A,B	=	Target Analyte
I	=	Internal Standard
M	=	Summation Analyte
S	=	Surrogate
T	=	Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

MBLK	=	Method Blank	ICSA	=	Interference Check Standard "A"
DUP	=	Method Duplicate	ICSAB	=	Interference Check Standard "AB"
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate
BS	=	Method Blank Spike	BSD	=	Method Blank Spike Duplicate
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank
ICV	=	Initial Calibration Verification	CCV	=	Continuing Calibration Verification
PDS	=	Post Digestion Spike	SD	=	Serial Dilution
OPR	=	Ongoing Precision and Recovery Standard			

CERTIFICATIONS

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

The American Association for Laboratory Accreditation [A2LA] for Biological Testing, ISO/IEC 17025 (Certificate# 3045.01)

The American Association for Laboratory Accreditation [A2LA] for Environmental Department of Defense Testing, ISO/IEC 17025 (Certificate# 3045.02)

Illinois EPA for the analysis wastewater and solid waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (accreditation #200064)

Illinois Department of Public Health for the microbiological analysis of drinking water (registry #1755266)

Indiana DEM approved support laboratory for solid waste and wastewater analyses

Indiana SDH for the chemical analysis of drinking water (lab #C-45-03)

Indiana SDH for the microbiological analysis of drinking water (lab #M-45-8)

Kansas Department of Health and Environment for the analysis of drinking water, wastewater, and solid hazardous waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (Certificate No. E-10397)

Kentucky EPPC for the analysis of samples applicable to the Underground Storage Tank program (lab #75)

North Carolina DENR for the environmental analysis for NPDES effluent, surface water, groundwater, and pretreatment regulations(certificate #597)

Wisconsin DNR for the chemical analysis of wastewater and solid waste (lab #998036710)

COOLER INSPECTION

Client Name: Environmental Restoration

Work Order Number: 11E0515

Checklist completed by: 5/13/2011 11:14:00AM Ken Smith

Date: Thursday, May 26, 2011

Date/Time Received: 05/13/2011 10:15

Received by: Ken Smith

Reviewed by: 5/13/2011 KGF

Carrier Name: Microbac

Cooler ID: Default Cooler

Container/Temp Blank Temperature: 4.00°C

After-Hour Arrival?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Shipping container/cooler in good condition?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample containers?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
COC present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient client identification?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient sample collector information?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included a sample description?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC agrees with sample labels?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate matrix?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included date of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included time of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate number of containers?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples in proper container/bottle?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sample containers intact?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
All samples received within holding time?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
If the samples are preserved, are the preservatives identified?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	

If No, adjusted by: _____

COC included the requested analyses?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC signed when relinquished and received?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples received on ice?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples properly preserved?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Voa vials for aqueous samples have zero headspace?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>

Cooler Comments: _____

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.

Sample ID	Client Sample ID	Comments
11E0515-01	MD-NHL-1	
11E0515-02	MD-BL-2	
11E0515-03	MD-BG-3	
11E0515-04	MD-AL-4	
11E0515-05	MD-INK-5	
11E0515-06	MD-INK-6	
11E0515-07	MD-BS-7	
11E0515-08	MD-OXS-8	
11E0515-09	MD-BAG-9	
11E0515-10	MD-Chem-10	



April 30, 2011

Environmental Restoration
16660 South Canal Street
South Holland, IL 60437-

Work Order No.: 11D0874

Re: Markham, IL

Dear Toby Viehweg:

Microbac Laboratories, Inc. - Chicagoland Division received 34 sample(s) on 4/21/2011 2:45:00PM for the analyses presented in the following report as Work Order 11D0874.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Jeff Loewe, Division Manager at jeff.loewe@microbac.com. You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President at james.nokes@microbac.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Falvey". The signature is stylized with a large, looped "K" and a cursive "Falvey".

Kevin Falvey
Account Manager

**WORK ORDER SAMPLE SUMMARY****Date:** Saturday, April 30, 2011

Client: Environmental Restoration
Project: Markham, IL
Lab Order: 11D0874

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
11D0874-01	MDC-YD		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-02	MDC-YD		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-03	MDC FF2 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-04	MDC-FF2 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-05	MDC FF2 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-06	MDC-FF2 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-07	MDC FF2 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-08	MDC-FF2 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-09	MDC FF2 20		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-10	MDC-FF2 20		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-11	MDC FF1 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-12	MDC-FF1 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-13	MDC FF1 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-14	MDC-FF1 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-15	MDC FF1 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-16	MDC-FF1 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-17	MDC FF1 20		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-18	MDC-FF1 20		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-19	MDC EMC 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-20	MDC-EMC 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-21	MDC EMC 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-22	MDC-EMC 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-23	MDC EMC 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-24	MDC-EMC 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-25	MDC-EMC 20		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-26	MDC-EMC 20		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-27	MDC-901 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-28	MDC-901 5		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-29	MDC-901 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-30	MDC-901 10		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-31	MDC-901 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-32	MDC-901 15		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-33	MDC-901 20		04/20/2011 11:00	4/21/2011 2:45:00PM
11D0874-34	MDC-901 20		04/20/2011 11:00	4/21/2011 2:45:00PM



CASE NARRATIVE

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Project: Markham, IL

Lab Order: 11D0874

B - the Method Blank associated with the samples contained Chromium and Lead at a level above the reporting limit. This is considered insignificant, as the concentration in the samples was more than ten-times that measured in the blank.

The Matrix Spike and Matrix Spike Duplicate performed on the MDC-YD sample failed the accuracy criteria for, both, soluble and insoluble forms of Hexavalent Chromium. This bias is due to the high indigenous analyte concentration (relative to the spike amount).



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-YD

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-01

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	9000	1.4	B	mg/Kg	10	04/27/2011 21:36
Lead	A	34000	3.5	B	mg/Kg	10	04/27/2011 21:36
		Method: SW-846 7196A				Analyst: GOEHL	
Hexavalent Chromium		Prep Method: SW846 3060A				Prep Date/Time: 04/28/2011 15:39	
Chromium, Hexavalent	A	2800	80	B	mg/Kg	200	04/29/2011 15:07



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-YD

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-02

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 09:07				
TCLP Metals by ICP							
Chromium	A	1.19	0.00300			1	04/25/2011 14:15
Lead	A	7.00	0.00750			1	04/25/2011 14:15



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF2 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-03

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	8600	1.5	B	mg/Kg	10	04/27/2011 21:52
Lead	A	35000	3.8	B	mg/Kg	10	04/27/2011 21:52



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF2 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-04

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	5.28	0.00300			1	04/27/2011 18:59
Lead	A	24.8	0.00750			1	04/27/2011 18:59



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF2 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-05

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	8400	1.5	B	mg/Kg	10	04/27/2011 21:57
Lead	A	34000	3.7	B	mg/Kg	10	04/27/2011 21:57



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF2 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-06

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	2.90	0.00300			1	04/27/2011 19:15
Lead	A	16.5	0.00750			1	04/27/2011 19:15



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF2 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-07

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	7300	1.5	B	mg/Kg	10	04/27/2011 22:03
Lead	A	30000	3.6	B	mg/Kg	10	04/27/2011 22:03



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF2 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-08

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	2.42	0.00300			1	04/27/2011 19:21
Lead	A	0.0813	0.00750			1	04/27/2011 19:21



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF2 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-09

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6300	1.4	B	mg/Kg	10	04/27/2011 22:08
Lead	A	25000	3.6	B	mg/Kg	10	04/27/2011 22:08



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF2 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-10

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	36.3	0.00300			1	04/27/2011 19:26
Lead	A	ND	0.00750			1	04/27/2011 19:26



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF1 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-11

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6100	1.4	B	mg/Kg	10	04/27/2011 22:14
Lead	A	24000	3.6	B	mg/Kg	10	04/27/2011 22:14



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF1 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-12

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/25/2011 10:11	
Chromium	A	6.50	0.00300			1	04/27/2011 19:32
Lead	A	4.34	0.00750			1	04/27/2011 19:32



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF1 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-13

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6800	1.5	B	mg/Kg	10	04/27/2011 22:19
Lead	A	28000	3.7	B	mg/Kg	10	04/27/2011 22:19



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF1 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-14

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: 1311/6010B				Analyst: SA	
TCLP Metals by ICP		Prep Method: /SW846 3010A				Prep Date/Time: 04/25/2011 10:11	
Chromium	A	6.34	0.00300			1	04/27/2011 19:37
Lead	A	2.33	0.00750			1	04/27/2011 19:37



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF1 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-15

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	8000	1.5	B	mg/Kg	10	04/27/2011 22:46
Lead	A	33000	3.8	B	mg/Kg	10	04/27/2011 22:46



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF1 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-16

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	9.20	0.00300			1	04/27/2011 19:43
Lead	A	0.130	0.00750			1	04/27/2011 19:43



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC FF1 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-17

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6400	1.5	B	mg/Kg	10	04/27/2011 22:52
Lead	A	26000	3.7	B	mg/Kg	10	04/27/2011 22:52



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-FF1 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-18

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	9.68	0.00300			1	04/27/2011 20:10
Lead	A	0.0419	0.00750			1	04/27/2011 20:10



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC EMC 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-19

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	7100	1.3	B	mg/Kg	10	04/27/2011 22:57
Lead	A	28000	3.3	B	mg/Kg	10	04/27/2011 22:57



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-EMC 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-20

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	1.66	0.00300			1	04/27/2011 20:15
Lead	A	1.04	0.00750			1	04/27/2011 20:15



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC EMC 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-21

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	9100	1.5	B	mg/Kg	10	04/27/2011 23:02
Lead	A	37000	3.8	B	mg/Kg	10	04/27/2011 23:02



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-EMC 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-22

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	7.30	0.00300			1	04/27/2011 20:20
Lead	A	0.0200	0.00750			1	04/27/2011 20:20



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC EMC 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-23

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6700	1.5	B	mg/Kg	10	04/27/2011 23:08
Lead	A	27000	3.8	B	mg/Kg	10	04/27/2011 23:08



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-EMC 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-24

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	14.5	0.00300			1	04/27/2011 20:26
Lead	A	0.00900	0.00750			1	04/27/2011 20:26



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-EMC 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-25

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6400	1.5	B	mg/Kg	10	04/27/2011 23:13
Lead	A	26000	3.7	B	mg/Kg	10	04/27/2011 23:13



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-EMC 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-26

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	17.5	0.00300			1	04/27/2011 20:31
Lead	A	0.00500	0.00750			1	04/27/2011 20:31



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-27

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	7600	1.3	B	mg/Kg	10	04/27/2011 23:18
Lead	A	31000	3.3	B	mg/Kg	10	04/27/2011 23:18



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 5

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-28

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	4.35	0.00300			1	04/27/2011 20:36
Lead	A	1.72	0.00750			1	04/27/2011 20:36



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-29

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	7500	1.4	B	mg/Kg	10	04/27/2011 23:24
Lead	A	30000	3.5	B	mg/Kg	10	04/27/2011 23:24



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 10

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-30

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	3.14	0.00300			1	04/27/2011 20:42
Lead	A	0.0624	0.00750			1	04/27/2011 20:42



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-31

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6700	1.4	B	mg/Kg	10	04/27/2011 23:29
Lead	A	28000	3.6	B	mg/Kg	10	04/27/2011 23:29



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 15

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-32

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	2.58	0.00300			1	04/27/2011 20:47
Lead	A	0.00280	0.00750			1	04/27/2011 20:47



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-33

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SW-846 6010B				Analyst: SA	
Total Metals by ICP		Prep Method: SW846 3050B				Prep Date/Time: 04/25/2011 10:55	
Chromium	A	6500	1.5	B	mg/Kg	10	04/27/2011 23:35
Lead	A	26000	3.7	B	mg/Kg	10	04/27/2011 23:35



Analytical Results

Date: Saturday, April 30, 2011

Client: Environmental Restoration

Client Project: Markham, IL

Client Sample ID: MDC-901 20

Sample Description:

Matrix: Solid

Work Order/ID: 11D0874-34

Sampled: 04/20/2011 11:00

Received: 04/21/2011 14:45

Analyses	AT	Result	RL	Qual	Units	DF	Analyzed
Method: 1311/6010B			Analyst: SA				
Prep Method: /SW846 3010A			Prep Date/Time: 04/25/2011 10:11				
TCLP Metals by ICP							
Chromium	A	2.16	0.00300			1	04/27/2011 20:52
Lead	A	0.00970	0.00750			1	04/27/2011 20:52

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed
mg/L	=	Milligrams per Liter (ppm)
mg/Kg	=	Milligrams per Kilogram (ppm)
U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
B	=	Detected in the associated method Blank at a concentration above the routine PQL/RL
D	=	Dilution performed on sample
ND	=	Not Detected at the Reporting Limit (or the Method Detection Limit, if used)
E	=	Value above quantitation range
H	=	Analyte was prepared and/or analyzed outside of the analytical method holding time
I	=	Matrix Interference
R	=	RPD outside accepted recovery limits
S	=	Spike recovery outside recovery limits
Surr	=	Surrogate
DF	=	Dilution Factor
RL	=	Reporting Limit
MDL	=	Method Detection Limit
NR	=	Not Recovered

ANALYTE TYPES: (AT)

A,B	=	Target Analyte
I	=	Internal Standard
M	=	Summation Analyte
S	=	Surrogate
T	=	Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

MBLK	=	Method Blank	ICSA	=	Interference Check Standard "A"
DUP	=	Method Duplicate	ICSAB	=	Interference Check Standard "AB"
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate
BS	=	Method Blank Spike	BSD	=	Method Blank Spike Duplicate
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank
ICV	=	Initial Calibration Verification	CCV	=	Continuing Calibration Verification
PDS	=	Post Digestion Spike	SD	=	Serial Dilution
OPR	=	Ongoing Precision and Recovery Standard			

CERTIFICATIONS

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

The American Association for Laboratory Accreditation [A2LA] for Biological Testing, ISO/IEC 17025 (Certificate# 3045.01)

The American Association for Laboratory Accreditation [A2LA] for Environmental Department of Defense Testing, ISO/IEC 17025 (Certificate# 3045.02)

Illinois EPA for the analysis wastewater and solid waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (accreditation #200064)

Illinois Department of Public Health for the microbiological analysis of drinking water (registry #1755266)

Indiana DEM approved support laboratory for solid waste and wastewater analyses

Indiana SDH for the chemical analysis of drinking water (lab #C-45-03)

Indiana SDH for the microbiological analysis of drinking water (lab #M-45-8)

Kansas Department of Health and Environment for the analysis of drinking water, wastewater, and solid hazardous waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (Certificate No. E-10397)

Kentucky EPPC for the analysis of samples applicable to the Underground Storage Tank program (lab #75)

North Carolina DENR for the environmental analysis for NPDES effluent, surface water, groundwater, and pretreatment regulations(certificate #597)

Wisconsin DNR for the chemical analysis of wastewater and solid waste (lab #998036710)



COOLER INSPECTION

Client Name: Environmental Restoration

Date: Saturday, April 30, 2011
Date/Time Received: 04/21/2011 14:45

Work Order Number: 11D0874

Received by: Ken Smith

Checklist completed by: 4/22/2011 9:14:00AM Ken Smith

Reviewed by: 4/22/2011 KGF

Carrier Name: Microbac

Cooler ID: Default Cooler

Container/Temp Blank Temperature: 5.00°C

After-Hour Arrival?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Shipping container/cooler in good condition?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample containers?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
COC present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient client identification?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient sample collector information?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included a sample description?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC agrees with sample labels?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate matrix?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included date of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included time of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate number of containers?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples in proper container/bottle?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sample containers intact?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
All samples received within holding time?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
If the samples are preserved, are the preservatives identified?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	

If No, adjusted by? _____

COC included the requested analyses?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC signed when relinquished and received?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples received on ice?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples properly preserved?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Voa vials for aqueous samples have zero headspace?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>

Cooler Comments: _____

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.

Sample ID	Client Sample ID	Comments
11D0874-01	MDC-YD	
11D0874-02	MDC-YD	
11D0874-03	MDC FF2 5	
11D0874-04	MDC-FF2 5	
11D0874-05	MDC FF2 10	
11D0874-06	MDC-FF2 10	
11D0874-07	MDC FF2 15	
11D0874-08	MDC-FF2 15	
11D0874-09	MDC FF2 20	
11D0874-10	MDC-FF2 20	
11D0874-11	MDC FF1 5	
11D0874-12	MDC-FF1 5	
11D0874-13	MDC FF1 10	
11D0874-14	MDC-FF1 10	
11D0874-15	MDC FF1 15	
11D0874-16	MDC-FF1 15	
11D0874-17	MDC FF1 20	
11D0874-18	MDC-FF1 20	
11D0874-19	MDC EMC 5	
11D0874-20	MDC-EMC 5	
11D0874-21	MDC EMC 10	
11D0874-22	MDC-EMC 10	
11D0874-23	MDC EMC 15	
11D0874-24	MDC-EMC 15	
11D0874-25	MDC-EMC 20	
11D0874-26	MDC-EMC 20	
11D0874-27	MDC-901 5	
11D0874-28	MDC-901 5	
11D0874-29	MDC-901 10	
11D0874-30	MDC-901 10	
11D0874-31	MDC-901 15	
11D0874-32	MDC-901 15	
11D0874-33	MDC-901 20	
11D0874-34	MDC-901 20	



Report to:	Tony Distave
Email to:	T.Distave@erdc.com
City/State	Markham IL
Collected:	

2

Prepared by: Vishwesh

Report to:	Tony Distave
Email to:	T.Distave@erdc.com
City/State	Markham IL
Collected:	

2

Temp

Other

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